The Veterinary Record

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888.

No. 31. JULY 30, 1938 VOL. 50.

Diseases of Sheep in the South-West*

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In presenting this paper to you I am painfully aware of its many shortcomings. In the first place I have made no mention of what I consider are primarily responsible for probably 75 per cent. or more of the losses among sheep which have passed the weaning age. I refer, of course, to internal parasites and I have not included them for the very good reason that you will have a discussion entirely devoted to parasites at another meeting. While sheep population in this area cannot compare in number with those of the northern hill grazings, these animals are part and parcel of the farming system down here and, as far as Wiltshire and Dorset are concerned, these counties possess a sheep population which compares very favourably with other counties which are not provided with extensive hill or mountain grazings.

The most favoured breed in the area is probably the Hampshire Down, either pure or crossed with a Suffolk ram, the aim in this case being the production of early fat lambs, the ewe lambs kept on as breeders. Other breeds include X-breds, half-breds, the various Welsh breeds which provide storé lambs in the autumn, the Exmoor and to a lesser extent Dorset Horn. The sheep in many cases are able to range over the Downs during the summer and hurdling of flocks on arable crops is also extensively practised. For lambing, a straw-thatched lambing yard with coops for the ewes is very much favoured and while this system no doubt conserves much of the carbohydrate which under more severe conditions would be used up in maintaining body heat, extreme care is necessary to avoid the many ailments which may affect the young animals when born in these lambing yards.

Research into the many problems which confront the sheep breeder has been widely extended during the last decade, and while a number of infections have been brought under control there still remain many which demand and are at present receiving attention. I do not propose to include and present a miscellaneous collection of diseases to you to-day, but rather to select a few which are of importance in the south-west of England and trust that my remarks may form the basis of a discussion.

*Paper presented to the Southern Counties Division, N.V.M.A., at the Fifty-fourth Annual General Meeting, held at Salisbury, March 18th, 1938.

LAMB DYSENTERY

It is unnecessary to enumerate the symptoms of this disease; they will be well known to most of you. *Post-mortem* findings are not, however, constant; frequently the only lesion found may be intense congestion of a portion of the intestines, the intestinal contents being blood stained. In other cases marked inflammatory changes are absent and careful search along the whole length of the intestines is required in order to detect small brownish ulcers from the size of a pinhead to about $\frac{1}{4}$ of an inch in diameter. These ulcers may be absent, may be few in number or may be quite numerous and easily discernible. If a sufficient number of specimens for *post-mortem* examination are available, however, what may be called typical lamb dysentery ulcers can invariably be found in at least one of the cases. I have never yet seen in the West Country the type of lesion so common in the East of England, namely, perforated ulcers of a blackish colour with adherence between the coils of the intestine.

Serum as a prophylactic has long since proved its worth. It is, however, essential that serum of a sufficiently high standard of potency is used. To enable you to appreciate this fully, perhaps I may recall to your minds the complex structure of the toxins produced by the Welchii group of organisms. The outstanding contribution to the knowledge of the *Cl. welchii* group of organisms was made by my former colleague, Wilsdon, who divided them up into four main types, A, B, C and D. He also showed that Type B (the lamb dysentery bacillus) was antigenically similar in structure to a combination of Type C and Type D, and included what he called the W, X and Z factors. An efficient lamb dysentery serum, then, must possess at least two efficient antitoxins, one to neutralise toxin of the C type, and one to neutralise toxin of the D type. Montgomerie and Rowlands[2] tested five brands of commercial lamb dysentery serum, two manufactured in England and three of foreign origin. They found that one English

and one foreign brand possessed both the essential types of antitoxin and were therefore efficient. Two of the foreign brands contained no antitoxin of either types and the other English serum was of a very low antitoxin content. The use of an inefficient brand of lamb dysentery serum might easily bring discredit on sound professional diagnosis and advice, but fortunately the leading manufacturers of serum, in this country at least, are fully aware of the requirements as regards this particular product.

Enterotoxaemia

Enterotoxaemia has been accorded close attention during the last few years and the term has been used to include the condition known as "struck" in the Romney Marsh and also "pulpy kidney" disease. In these conditions, death is the result of the absorption of toxin formed within the small intestine by one of the *C. welchii* types which are able, under certain conditions not fully understood, to multiply rapidly in that situation. I have encountered the disease in young sucking lambs 7-21 days old, in early fat lambs and also in ewes. Death in most cases is sudden and the findings on *post-mortem* examination not always very definite; indeed, unless the examination is carried out very soon after death many of the *ante-mortem* lesions may be masked by the *post-mortem* changes which rapidly take place. In a typically acute case on *post-mortem* one generally finds congestion of the mesenteric blood vessels, but the peritoneal fluid is only slightly in excess. The small intestines may show no visible alteration, but in some cases intense congestion of the mucosa may be observed. The kidneys have a blotchy appearance due to congestion of the surface blood vessels and this congestion can be seen when this organ is cut through with a knife. Probably the most constant feature is the striking appearance of the heart. The pericardial sac contains an excess of fluid either straw coloured or blood stained and is very often distended. Haemorrhages are frequently quite extensive on the epicardium and endocardium.

Enterotoxaemia occurs among sheep on grass and in flocks moved from grass to be folded over roots. I have not come across any flocks where the losses have been particularly heavy—1 or 2 per cent. is common among ewes. One outbreak among young lambs led to the death of about 30, approximately 14·5 per cent. of the total lamb crop. On another farm, losses of 5 per cent. of the lambs had occurred over a period of three years.

Little reliable information is available concerning prophylactic measures, possibly on account of the suddenness with which losses occur over a period of a few days in many cases and then as suddenly cease. The few controlled experiments using serum carried out in the south-west have been rendered valueless by there being no subsequent losses in either the inoculated or the control groups. There are numerous other remedies which are claimed to prevent further losses, but in most instances no animals are left untreated as controls.

"Swayback"

"Swayback" is the term given by shepherds to a form of paralysis which occurs in young lambs in certain districts. The condition is characterised by paralysis of the hind extremities which commonly appears when the lambs are from one month to twelve weeks old. A disease comparable with, if not identical to "swayback" has been reported in Australia, South America, Sweden and South Africa. The pathological lesions associated with "swayback" as it occurs in Great Britain, are almost entirely confined to the central nervous system. The paralysis manifests itself by a swaying motion of the hind extremities and incontinence is frequently observed in animals so affected. I have observed this type of the disease on farms with "flying flocks"; the incidence of the disease was low and the affected animals made slow progress, but were eventually sold as mutton. A more severe type of the disease sometimes appears in lambs soon after birth. The animal is unable to rise, but may live for several days showing marked inco-ordination of movement and general weakness of the hind quarters. The incidence of the disease in a flock is subject to variation year by year and it is said that a ewe may produce a "swayback" lamb one year and a healthy lamb the next.

No satisfactory explanation as to the cause of the condition was forthcoming until last year when Bennetts and Chapman[3] published a preliminary report of their work on a similar condition among lambs in West Australia and which they called "enzootic ataxia." They found that a marked anaemia existed in ewes which gave birth to affected lambs and that the feeding of chemically pure copper sulphate during pregnancy definitely prevented the appearance of the anaemia in the ewes, and the lambs born subsequently were perfectly normal. Controls kept under identical conditions of management produced lambs showing enzootic ataxia in every case. From the results gathered by these writers they concluded that the cause of enzootic ataxia was a copper deficiency.

Very little work has been done on the copper content of the soils or herbage in this country and none, so far as I know, on the copper content of livers of healthy and "swayback" lambs, so that at this stage it is not possible to tell whether the same conditions obtain in this country as in West Australia. The work in Australia does, however, open up a useful channel for further investigation.

In many respects the findings of Bennetts fit in with the history of "swayback" flocks in the west. It does appear that "swayback" is a deficiency disease which becomes more severe the longer the ewes remain on an "affected" farm. For instance, in one case one batch of ewes was bought every September of the years 1934, 1935 and 1936. Lambing commenced on March 1st each year. The 1935 lambing season was normal. In 1936, several cases of "swayback" occurred, but only in the lambs from the ewes purchased in 1934. In 1937, "swayback" of the severe type occurred in lambs from the 1934 ewes and also in lambs from the 1935 ewes, but none in the ewes purchased in 1936.

Omphalophlebitis

The general pyaemic manifestations of this condition appear to be grouped by the farmers in this area into three types classified according to the organ or organs affected. These types are navel-ill, joint-ill and "spotted liver." The disease is readily recognisable in all its forms and is often particularly prevalent where a permanent lambing pen is used, resulting in heavy contamination of the surroundings. The incidence of the disease appears to vary from year to year; for example, numerous outbreaks occurred in the spring of 1936. In many of these cases the high incidence of the disease and the heavy lamb mortality could not be ascribed to faulty hygiene. Several farmers had lambed the ewes in fields which were moderately dry in undulating country. The application to the navel cord of an antiseptic, such as tincture of iodine, had also been carried out immediately after the birth of the lamb. Thus, in spite of healthy surroundings quite severe outbreaks may be experienced in exceptional years, even though every care is taken to avoid contamination of the navel cord with pyogenic organisms.

Much of the work on navel-ill has been carried out on the condition as it occurs in foals and calves and in these animals streptococci appear to predominate in the abscesses. *B. coli* and other bacteria have also been implicated. Hellesnes[4] has found that a polyarthritis in lambs was caused by the bacillus of swine erysipelas and the condition is of rather common occurrence in certain parts of Norway. The disease in Norway often appears as a real enzootic, especially where the field used for lambing had been recently treated with pig manure. In these parts streptococci appear to predominate. Nineteen lambs bacteriologically examined in the 1936 lambing season all gave a pure culture of a haemolytic streptococcus from the abscesses and these organisms were also present in the blood circulation. It is still a question of debate whether intra-uterine infection of animals can occur and I should like to hear your opinions with regard to it.

Pregnancy Toxaemia

Pregnancy toxaemia, also known as "twin disease," fatty liver, etc., has been recognised in many parts of the world. In this country many of the earlier reports of the disease concerned sheep which were being folded over arable crops and at that time it was considered that the predisposing causes were lack of exercise and high feeding. Since that time, however, numerous outbreaks have been encountered among grass sheep with extended grazing areas and without any supplementary food. All the outbreaks I have seen in the west have been among grass flocks, some of which received supplementary food, others being fed on grass alone. The incidence of the disease varies from year to year. In the spring of 1936 it was particularly prevalent. In one flock of 280 ewes, the losses in 1935 from pregnancy toxaemia were 2·5 per cent.; in 1936, 15 per cent., while in 1937 no losses from this disease occurred.

Diagnosis of this condition may be obtained by clinical examination along with the history of the case. The first symptoms are observed usually about three weeks before the lambs are due. The appearance of the disease frequently follows a spell of severe weather when many of the animals have to fall back on their own body reserves. Ewes which are carrying twin lambs are those generally affected, but it is said in really severe outbreaks ewes carrying single lambs may also succumb. In flocks where different breeds or sheep of different ages are kept the disease is frequently confined to one age group or one breed.

The symptoms shown by an affected case are characteristic. The animal stands in a normal manner and when approached may not move or walks a few paces and stops. Blindness, entire or partial, exists at this stage. This dullness may continue for hours or days before the animal lies down in a comatose state and refuses to rise. Delirium and convulsions may occur in the later stages. If the ewe gives birth to lambs before the symptoms are well advanced recovery may take place.

The most constant lesion associated with *post-mortem* examinations is the fatty infiltration of the liver. In some cases, however, the liver does not show this macroscopic change, but the cells appear to be damaged and presumably are unable to carry out their normal functions.

The etiology of the disease is still obscure. It appears to be the result of an upset in metabolism due to the heavy demands of pregnancy and judging by the excessive amount of non-protein nitrogen in the blood of affected cases an intoxication of some kind is indicated. It is still a matter of question in which organ of the body the preliminary breakdown occurs, but there is little doubt that the privations experienced by sheep which have to fall back on the

reserves of food stored in their own bodies are sufficient to upset the normal balance. The body fat at that time is being mobilised and transported to the liver and this organ does not appear to be able to utilise the fats thus placed at its disposal. Treatment of affected cases has not up to the present proved satisfactory. Injections and the feeding of glucose, injections of calcium gluconate and magnesium lactate, have all been tried and while good results have been reported in a few of the cases the response to the drugs used has been not at all conclusive.

Contagious Pustular Dermatitis

This condition, popularly known under a variety of names, such as "orf" or "wildfire," is fairly common among young lambs and is responsible for considerable unthriftiness and occasionally death. The distinctive characteristics of the disease are the formation on or around the lips of extensive crusts or warty-like growths which are easily removed leaving a raw bleeding surface. The lesions are also frequently found in other parts of the body, *e.g.*, the coronet, anus and, in the case of the ewes, on the udder. The eruptions, which are first in the form of discrete vesicles or pustules surrounded by a zone of inflammation, are succeeded by small ulcers. Healing may take place rapidly beneath the scab which subsequently forms, but in some cases the ulcers develop into pseudo-papillomatous outgrowths which may attain considerable size.

Outbreaks of the disease are more prevalent during the summer months and, while lambs soon after birth may be affected in many cases, weaned lambs under one year of age show lesions. Older sheep appear to be more resistant, but are not immune unless they have passed through an attack earlier in life.

It was at one time considered that the disease was due to the entrance of *B. necrosis* into the tissues through small injuries. Glover[5] has shown that the primary cause of the condition is a virus and that the severity of an attack depends on the type of secondary bacterial invader which is likely to be present rather than any marked variation in the virus itself.

The usual method of treating affected animals is to remove the scabs formed and dress the lesions with astringent and antiseptic lotions and ointments. Vaccination experiments carried out in various parts of the country have shown that a strong immunity is developed, but the practical difficulty is that a period of three weeks must elapse after vaccination before immunity is satisfactorily established. Vaccination on farms where the disease does not appear until the lambs are a month old is a very useful prophylactic and even if the condition does crop up before the three weeks have elapsed, there is reason to believe that vaccination modifies the course of the disease.

References

[1]University of Cambridge, 2nd Report.
[2]*Vet. Rec.* **48.** 50. p. 1481.
[3]Bennetts, H. W., and Chapman, F. E. *Austral. Vet. J.* **13.** 4. 138.
[4]Hellesnes, P. Abst. *Vet. Bulletin.* Vol. **6.** No. 5. p. 399.
[5]Glover. University of Cambridge, Reports 1 and 3.

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Discussion

Mr. N. S. Barron opened the discussion, in the following terms: We have had a most enjoyable and instructive paper from Mr. Menzies, who I think was very wise to avoid parasites, as they constitute quite a field on their own.

Our knowledge in connection with diseases of sheep has, as Mr. Menzies rightly says, been very considerably extended during the last decade and it is gratifying to realise that our thanks are due no less to workers in this country than to those abroad; in connection with this subject we think more especially of those in Australia. Although conditions of sheep farming in the latter country are very markedly different from those which exist here, this is no reason why we should not pay the closest attention to the results obtained by investigators in that country: we might be able to apply them as a whole or in part to our own problems.

From being almost as insignificant a part of practice as cats and dogs once were—and still are in a few practices—the sheep has assumed considerable prominence. This is quite a natural development, for whereas once we could not help materially now we find ourselves in an appreciably better position as a result of increased knowledge and experience based on the application of new methods.

In connection with many of the diseases with which Mr. Menzies has dealt he has given us such a full and accurate story that there are few gaps to fill or threads to pull out.

I was glad to note that he had not overlooked the question of variability of potency of L.D. sera on the market. The chances of a breakdown and subsequent disappointment when a deficient serum has been used cannot be overemphasised. It is hoped by now that the firms implicated have taken steps to improve their product.

It seems to me that putrefactive changes take place more rapidly in the sheep than in any other domestic animal with which we have to deal. The lungs very soon assume a congested appearance; in the thorax fluid collects which is often blood stained and bubbles of gas appear in the liver making it rather friable. If opinions were based only upon early *post-mortem* examinations—and I would suggest not longer than six hours after death—I think that diagnoses would be greatly facilitated and generally more accurate. As a possible exception to what I have said

I might mention here pulpy kidney disease which, of course, has received its name from the characteristically pulpy appearance of these organs found *post-mortem*. Even putrefaction will not produce such a "sloppiness" as is seen here within twelve hours, though other indications of this disease, such as the cardial petechiae, may be masked.

In outbreaks of enterotoxaemia it is a remarkable fact that mortality is often so very low. Since the entire flock in which the deaths occur has been subjected to the same change of conditions this is surprising—I wonder whether Mr. Menzies has any suggestions to offer by way of explanation. It looks as though certain animals are more susceptible. This I know is a hard question and perhaps, if we knew the exact conditions in the alimentary tract which stimulated the sudden extensive growth and toxin production of the aerobe responsible, an explanation might be more readily available.

In connection with "swayback" in lambs, this appears to be enzoötic in certain parts of the country, especially Oxfordshire, Bucks and Northants, where losses of 1 to 2 per cent. of lambs born are usual each year. Such a state of things has, to my knowledge, existed for more than 30 years in one part. During the years 1934-5-6 I was closely associated with the condition in Northants where a flare-up occurred in 1934 and almost as suddenly subsided. The acute type, referred to by Mr. Menzies, in which the symptoms are apparent at birth or very shortly afterwards, was the type met with almost without exception. I can substantiate his remark that a ewe bearing an affected lamb one year will often produce normal offspring the following season. Experiment is handicapped, as in the case of immunisation experiments in enterotoxaemia, by the irregularity and suddenness of the onset of the disease from year to year.

My observations did not enable me to confirm Bennett's finding that "swayback" is a deficiency disease which becomes more severe the longer the ewes remain on an "affected" farm. There is still the possibility that it is a deficiency disease, however.

Am I right in assuming that Mr. Menzies recognises a type of omphalophlebitis where the navel alone is affected and revealing pus, or are the joints always affected as well? I have myself only had experience of the "joint" type in which the hocks and knees have been enlarged and from which pure cultures of a streptococcus could be obtained. Doubt exists in the minds of some sheep farmers as to the advisibility of tying or dressing the navel on the assumption that the infection comes from within. I have not been able to detect the organism in any other site than that of the joints. Still I agree this point needs clearing up as does the possibility of infection *via* the ewe. The chances of infection due to tailing must not be overlooked. I take it that the essayist would agree that at least when pus is to be found in the navel, it is best to facilitate drainage and not tie. The use of serum has proved more effective as a preventative than as a curative.

Pregnancy toxaemia of ewes has assumed considerable prominence of late and I imagine that it is even more prevalent than we are led to believe by the actual number of cases about which advice is sought. The symptoms and conditions of a typical outbreak are clearly described in the paper before us. I have also found that it may be an age group or a breed which determines that one section of a flock shall be affected and not another. Although the data in connection with the malady are rapidly accumulating we are still very much in the dark as to what upsets the metabolism of the ewe and how to control the disease. The possibility of an endocrine disturbance cannot be ignored and I am at the moment pursuing an enquiry along such lines. There are many aspects of this disease which we might discuss but as this would, I feel, achieve no purpose I will close my remarks here by reiterating my congratulations to Mr. Menzies on his paper and thanking you for granting me the privilege of opening the discussion.

The President (Mr. J. F. D. Tutt) congratulated Mr. Menzies on his paper, and Mr. Barron on the able way in which he had opened the discussion.

He agreed with Mr. Barron that the market was flooded with vaccines and sera of questionable value, and he did consider that legislation should be introduced not only insisting that their potency be guaranteed by the distributors, but that their use should not be extended to the lay public.

In the case of lamb dysentery, although he had not had many outbreaks, he was of the opinion that the early inoculation of the lamb probably gave better results than immunising the ewe at the two periods advised by the distributors of what most of the previous speakers had mentioned as being the most reliable preparation to employ.

He had had an outbreak of "swayback" in the lambs in a flock of Hampshire Downs in 1937. All the affected lambs had died. He was on the point of calling in Mr. Barron, when the condition ceased as suddenly as it had appeared. It would seem possible that the condition was due, as in so many other sheep diseases, to invasion from the intestinal tract.

No cases had occurred in this flock this season, but the farmer had reported a fair proportion of losses in the ewes from uterine inertia. If pituitrin was given immediately after the sudden cessation of labour, following rupture of the foetal membranes, although the lambs might still be lost it was often possible to save the ewe.

There were seasons when joint-evil assumed the characters of an epidemic in flocks, and there did not appear to be any remedy which could be relied upon, although he had heard

that good results were sometimes obtained from nuclein. Mr. Barron had enquired if Mr. Menzies had had any success with prontosil in streptococcal infections. He (Mr. Tutt), would like to say that he had had very encouraging results in acute mastitis in cows, with soluseptasine, and it was quite possible that it might be of use in cases of this disease.

There seemed to be good reason to suppose that in foals in quite a fair number of cases, infection took place before birth.

In the case of pregnancy toxaemia, good results followed, in one instance, where the ewes were made to walk two miles a day, the corn ration was increased, and glucose given twice a day.

He had not had success with any line of treatment in lambing sickness, although calcium gluconate had been recommended. Very fortunately, these cases were very few and far between, in his area.

He had not seen any cases of braxy in his district, but one of his clients told him that he had had the disease a few years previously on the farm.

He agreed with Mr. Barron that it was most important to make a *post-mortem* examination whilst the animal was still "hot." The classical researches of Gaiger into braxy were an illustration of this. At the same time, it had to be remembered that the characteristic changes in the kidney in cases of pulpy kidney disease did not appear until about three hours after death.

Mr. J. B. White suggested that the potency of the various sera sold for animal use should be a matter for Governmental control, and that the sale of valueless sera should render the vendor liable to prosecution.

He would like to ask Mr. Menzies if one encountered pregnancy toxaemia amongst ewes in poor condition, and also how one carried out the vaccination for pustular dermatitis.

Mr. Esmond Brown observed that most of these sheep diseases had one thing in common—that they were diseases of localities or tracts of country, and it seemed probable that the remedy might come in making up the deficiency in balance of soils. In saying this he did not wish to throw cold water on bacteriological methods which might enable animals to resist disease in unfavourable surroundings.

Mr. H. C. Rockett said that frequently when they got sheep which were ill and could not find what was the matter with them, if they changed the diet or their position on the farm they seemed to do remarkably well. That was very unscientific, but very often it seemed to work.

The President said he was entirely in agreement with the suggestion that something should be done concerning serums. As their representative on the Council of the "National" he was quite prepared to raise the matter at the next meeting: he had done so previously at their meetings. He thought that when they pressed for a satisfactory product to be put on the market, they must at the same time press even more strongly for steps to be taken to ensure that the products could only get into the hands of those who knew how to use them. It was futile for the Government to introduce an Act to control disease and then permit all and sundry to go to a chemist's shop and buy the products, and use them nine times out of ten in the wrong case.

Mr. H. S. Caldwell (Hon. Secretary) mentioned that he had asked Mr. Menzies to write a paper at very short notice, and he was grateful to him for complying, and for producing such a comprehensive review of the non-parasitic sheep complaints in the south-west. It was also mentioned that it was hoped to have a paper on the parasitic diseases at a future meeting.

Mr. J. R. Hewer and Major Wallace also contributed to the discussion.

The Reply

Mr. Menzies, having thanked the members present for the manner in which his paper had been received, said that Mr. Barron very rightly had stressed the importance of carrying out *post-mortem* examinations as soon after death as possible on account of the rapid putrefactive changes which occur. The history of the cases was often very useful in arriving at a diagnosis, particularly where the more obscure diseases of lambing time might be encountered.

The problem of the susceptibility of certain sheep to enterotoxaemia was one which he was unable to answer satisfactorily and, as Mr. Barron pointed out, certain conditions in the intestine appeared to favour the production of toxin. As regards navel-ill, all the cases which he (Mr. Menzies) had encountered showed, in addition to abscess formation at the navel, extensive infection in the internal organs, particularly the liver, with pus in the umbilical vein and artery. The joints in such cases were often quite normal.

The method of inoculation adopted for protection against lamb dysentery appeared to depend on the system of farming and an economic factor also intruded. In the West of England the disease rarely appeared earlier than half way through lambing and the owner therefore preferred to wait for the disease to appear before carrying out the inoculations of the lambs born after the first case of lamb dysentery appeared.

Pregnancy toxaemia was particularly prevalent in the spring of 1936 and all the outbreaks he encountered were among sheep fed on grass only, the ewes being in rather bare condition. Vaccination against contagious pustular dermatitis was carried out by scarification. An incision into, but not through the skin, one to one-and-a-half inches long, was made inside the thigh and the vaccine rubbed in with a cotton wool swab. No disinfectant should be applied to the skin either before or after scarification.

ARMY VETERINARY SERVICE

Appointments in India

The following appointments in India are notified:—

Major P. S. Sparling, R.A.V.C., has assumed D.A.D.V.S., Kohat District, and Major C. Holland, M.C., is posted to Baluchistan.

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Promotion Examination

At the March examination for promotion, held in India and Burma, the following were successful: Majors F. B. Hayes, O.B.E., A. J. Kelly, and J. J. Mills; Lieutenants D. A. Green and D. MacK. Stewart—R.A.V.C.

Lieutenants Mian Mahmud Ahmad, Umesh Chandra Misra, Mohammad Yusuf Khan, and Dev Raj Sahni—I.A.V.C.

"Dry Sweating" in Horses

J. E. BARNES, M.R.C.V.S.,
COLOMBO, CEYLON

"Dry sweating" or "dry coat" of horses is, as the name implies, a chronic condition in which the animal does not sweat when he would normally be expected to do so.

Horses Affected. — English and Australian thoroughbreds of any colour or either sex. Arabs do not suffer, although I have known one Arab—a dark chestnut—to be "dry."

Occurrence.—"Dry sweating" is the curse of horses in Calcutta (hot weather), Bombay, Madras, Rangoon, Singapore, Colombo and the Dutch East Indies. Cases may occur in parts of South Africa.

Generally after some months' residence in Ceylon, and as a rule in the hot weather before the break of the South-West monsoon in May, horses about to go "dry" start to "blow" abnormally after exercise. The amount of visible sweat diminishes and loses its property of lathering. If the temperature of such a horse be taken after a one-mile gallop it may be found as high as 107° or 108° F. and respiration anything up to 150 p.m. As your readers will know, horses work here in the early morning. Such a horse's temperature might fall by evening to 103° or it might stay at 105° F. In the climatic conditions prevailing in Colombo it would not get to normal and the horse would "blow" in more or less distress. In a good number of cases there is some falling out of hair, especially of the face. The Calcutta investigators emphasised this feature which would appear to be much more marked there than here.

Horses in this condition retain it indefinitely if kept in Colombo. As race-horses, they cannot show their form and if exercised without discretion they die of hyperpyrexia. Before death they stagger about, fall and lie unconscious for some time, then on coming round they struggle to get up and go out, or they may die almost at once. As polo ponies they cannot play and, if forced to do so, die of hyperpyrexia.

The above is a picture of what happens to horses kept in Colombo. Most horses go to Nuwara Eliya for the hot weather (6,000 feet odd elevation) where it is often quite cold. Nine out of ten horses sent to Nuwara Eliya recover.

As a rule, those that are going to go "dry" in Colombo, on arrival in Colombo from Nuwara Eliya sweat profusely day and night for five or six days, then gradually go "dry," say, within 14 to 21 days of their return.

I said above "generally after some months' residence" because horses have to my knowledge disembarked "dry" *ex* England; the last one was Fairy Goblet by Salisbury—Elfglass by Soldennis, landed on April 5th, 1936. He died of hyperpyrexia while walking to Walles' Stables—four miles. The groom who travelled with the batch in which he was coming told me that all the voyage, when the others had been sweating well, he had been quite dry. I wrote to Colonel Blake who trained him in Ireland to ask whether he had been distressed on hot days in the summer. He said the horse had never sweated much but that they regarded him as a good fit sort. I was called in a few days ago to see a horse passing through to Madras from England. The groom with this one on the boat was treating him as though he had pneumonia. He was "dry."

Treatment.—Dry horses sent from Colombo to the hills—Kandy, 1,600 feet elevation, or Nuwara Eliya, 6,000 feet, or anywhere else for that matter, recover, as a rule, in from six to ten days. There are, however, obstinate cases which remain dry, some never recovering although kept in the hills for years after their racing careers are over. They have usually been bad cases for two to three years in Colombo.

The Royal Calcutta Turf Club, a number of years ago, tried to find a cure, the work being done at the Calcutta Veterinary College. The conclusion they arrived at was that the cause was a thyroid deficiency, and that the administration of thyroid extract tablets in the food solved the problem. I have been unable to improve with thyroid any cases I have treated.

A claim was made two or three years ago that Bayer's "padutin," a vaso-dilator hormone preparation, was an effective cure. Padutin has to be given intramuscularly and is expensive. I gave it a thorough trial on three or four horses and although I improved their coats, making them nice and bright, whereas they had been dull, I did not make the horses sweat. In any case a medicament that has to be given repeatedly, at short intervals, with a hypodermic syringe is ruled out as being impracticable for race horses in training.

I said above that any sweat there is from a dry horse does not lather. This is most noticeable in the first few days when a dry horse is starting to recover. The first place to sweat is down the mane and the sweat runs down the neck as a wet line and will not lather. Next the horse gets moist on the sides of the neck, behind the ears, on the breast, under the saddle and girths. When this stage is reached there may be a pause in the recovery for two or three days. Then a non-lathering wet area makes its appearance between the thighs; this eventually lathers and normal sweating is restored to the whole body.

The property of "lathering" of sweat may be restored by giving grated cocoanut in each feed. Grated cocoanut contains a high proportion of fat. Trainers give this cocoanut fairly willingly and, although one cannot claim that it

is a cure for dry sweating, it brightens horses' coats and any moisture that does come out of them will lather.

Sometimes one gets peculiar cases. In 1926 I was planting at 1,600 feet elevation where any horse would recover. On my return from leave to England I found a three-year-old I had left behind in training, very dry in Colombo. I took her back to the estate where she recovered in a week. In August I sent her to Colombo to race. She lived there for a week and by the end of that period was so dry that I decided not to run her. I transferred her to the estate and to my surprise she did not make the usual spectacular recovery but stayed dry until mid-October. Then one morning when I rode her she broke out nicely. On my return to the stable I put two or three heavy rugs on her and sweat ran off her in bucketfuls. Next day she was as dry as she had ever been and remained so until the following April when she sweated a bit, but she never sweated normally again and I shot her in 1929.

Last year I had an aged mare which had been racing for six years in Colombo and the whole time had been more or less dry. I had been hacking her in Nuwara Eliya and she had sweated normally. She went to Colombo by night train at the end of April and as I wanted her quiet for an indifferent horseman, to whom I had sold her, to ride in Colombo, I rode her myself the day she got to Colombo for some 20 minutes in the afternoon, between the hours of 5 and 6 o'clock. She walked back to the stable all right but broke out to sweat as though the hose pipe had been turned on her. At 7 p.m. she went down in her box in a sort of fit of convulsions. I got her up and fixed up a punkah to keep the air moving in her box. I gave her normal saline per rectum and she recovered in three or four days. The tetanic-like spasms of her whole muscular system lasted for about 36 hours. This case would appear to be one of heat cramps such as I have seen described in miners in the South African gold mines.

Aetiology.—The primary cause appears to me to be climatic. The hot and humid atmosphere has upset the blood salt balances.

In those cases which never recover, perhaps the sympathetic nervous centres controlling sweating have undergone a form of degeneration, or it may be that the correct blood salt balance cannot be restored, or both.

Innumerable slides have been made of the skin of dry horses and the sweat glands appear normal.

The relative humidity in stables in Colombo is very high, during the night in hot weather being over 90.

The essential difference between the climates of Colombo and, say, Nuwara Eliya, is that in Nuwara Eliya there is a greater range of temperature. This looks as though the adrenals might be stimulated and so be an accessory factor in recovery.

Pilocarpine does not make a "dry" horse sweat. I have not yet tried adrenalin because Wallis Hoare says it has no effect on the sweat glands, but I might try it in Colombo in May. The effect of adrenalin is very transitory so that one would have to repeat the dose and my argument against the hypodermic syringe again comes into play.

I am putting conditioned air in a stable in Colombo: it will be ready by May. While in the stable the horses, at my discretion, can virtually be in Nuwara Eliya, England, or even Edinburgh or at the North Pole and go to Colombo and that beastly climate to work.

Whether this will keep them sweating I do not know, but I have hopes.

Some Queer Masai Customs

D. H. DIMES, M.R.C.V.S., D.T.V.M.,
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The Masai inhabiting parts of Tanganyika Territory are a nomadic race, living mainly on milk, meat and blood. When trekking to fresh pastures with their few household belongings they use donkeys for transport, and occasionally a steady old ox will be seen carrying a load slung round its neck.

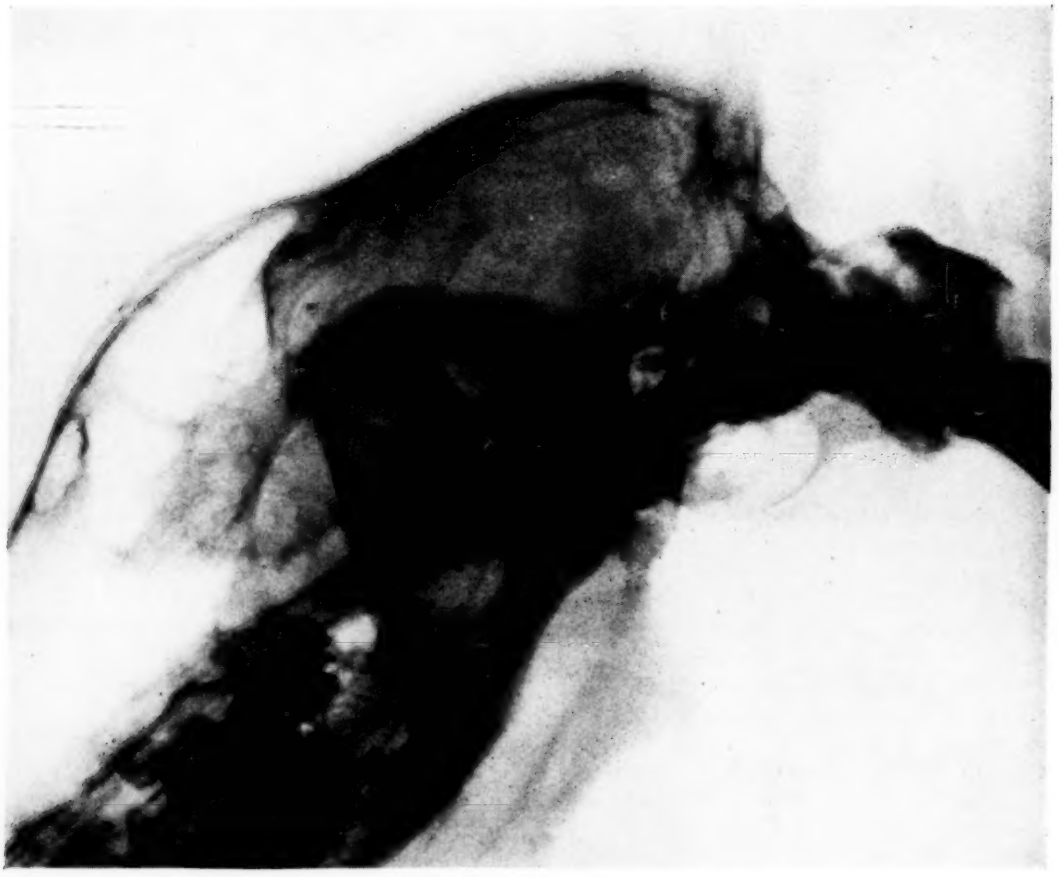
Most of the donkeys are very docile and need no bridles or other means of restraint. A cruel practice is, however, sometimes resorted to when a donkey happens to be vicious or intractable. A hole is bored through the poor beast's nose, above the nostril, through the skin and nasal septum; in this an iron ring is inserted and by means of the ring the animal is restrained.

Another somewhat cruel Masai custom is their treatment of cattle supposed to be poisoned by the ingestion of caterpillars. In certain seasons at the beginning of the rains, when the pastures after months of drought, burst forth once more into luscious growth, there appear large numbers of caterpillars, amounting to what is little less than a plague; they are the larvae of a common moth, the *Laphygma exempta*, and they devour, voraciously, the much-needed pastures. It is while these larvae are attached to the grass that they are ingested by cattle.

On one occasion when I was on safari in Masailand I came upon an outbreak of this poisoning. Animals attacked became unsteady in their gait, their eyesight appeared impaired and they stumbled about the bush until they eventually fell to the ground. Many cattle were lying about—some dead, some *in extremis*—while others were recovering.

Cranium of a greyhound showing apparent distension of the 3rd and 4th ventricles within the dotted line. By comparison of skiagraphs of normal brains the shadows indicated by arrows are abnormal. Note the clarity of the cochlea at C.

Radiographs by H. Kirk



Lateral view of the same dog's head. The pale area indicating abnormal space has been outlined.

The treatment carried out by the Masai was fairly drastic. The antidote used was wood ash or, if this was not available, soil from ant-heaps. In the case under discussion the latter was collected, mixed with water and rammed down the dazed beasts' throats. As the administration of this medicine was deemed extremely urgent and as water was not at once available native's urine was sometimes mixed with the ant-heap soil instead.

This simple antidote having been administered the next operation was to lop off the ears at the base and to cut a huge gash in the dewlap. To hasten the flow of blood still further, in some cases bleeding from the jugular is resorted to; incidentally, the Masai are very adept at this latter operation. A ligature, probably a thong of hide, is tied tightly round the base of the neck until the jugular is well distended; a native then shoots an arrow (the point of which has been protected by having a piece of cloth tied round it a short distance from its point to prevent it penetrating too far) into the jugular. The spurting blood is then collected into a gourd or other receptacle to be drunk by these, in more senses than one, blood-thirsty people. When this cruel treatment was finished the poor beast, looking a gory, pathetic picture of misery was left to recover or until death closed the painful scene. In the latter case the carcase was cut up for food.

So partial are the Masai to meat that practically all cattle that die of disease are eaten; even anthrax carcases. On one occasion, when a herd of cattle were being watered not far from my camp, one of the animals returning from the trough had gone but 20 yards when it fell dead. Having no microscope, a blood slide was taken for examination when I returned to my headquarters. As this case looked suspicious of anthrax the Masai headman was warned of the danger of eating the flesh of animals dying suddenly, but in spite of this warning the meat was devoured. On examination of the blood slide, later, anthrax bacilli were revealed.

Another peculiar custom of the Masai is the way in which they deprive their cattle of water. In the dry season cattle have to be content with a drink every two or even three days. Often the herds spend the whole day trekking to and from the water holes. At early daybreak they start the long journey and having reached the distant water holes and barely had their fill, they must start the long trek back to their kraals. There being no time at all for grazing, they return hungry. The next day is spent grazing on the dried-up pastures; the cattle returning parched at eventide have to wait until the following day before they can once more quench their burning thirst.

CLINICAL COMMUNICATIONS

Cerebellar Ataxia in a Greyhound

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Symptoms which may be ascribed to true ataxia are very rare in the dog, and still more rare in the cat. Ataxia is manifested by incoordinated or disordered gait, the animal exhibiting exaggerated muscular movements, the legs being lifted high and brought down forcibly. The feet are often wider apart than usual and progression is an erratic stagger. Ataxia is symptomatic of cerebellar disease and more rarely of spinal disease, lesions of the cerebellum infrequently causing complete paralysis.

Following is an account of an illness in a greyhound, diagnosed clinically (and confirmed radiologically) as a case of cerebellar ataxia. The animal was bought at 12 months of age, last March, when the vendor said it had been "queer." It looked poor and its appetite was in abeyance. It was a well-bred, good-looking animal and cost a large sum of money. Six weeks later, when the kennelman opened the door of the kennel one morning, the dog staggered to it, dragging its hind legs in a semi-paralysed manner. The attack lasted five minutes, after which the dog seemed perfectly well for the rest of the day. Similar attacks, however, occurred on four successive mornings, but passed off, leaving the animal apparently normal.

Three weeks afterwards another attack occurred, this time lasting two days and being complicated not only by paraplegia but by brachiplegia. The dog was quite helpless though it fed well, and there was no impairment of bowel or bladder action. On June 9th there was another and more severe attack, accompanied by paresis of the hind quarters, rapid (side to side) nystagmus, and great pain, causing the dog to cry out at intervals. Paresis occasionally gave place to complete paraplegia. On the last occasion the fore legs were not affected.

The owner became alarmed and sought advice. Upon approaching the dog, I saw at once that it was blind and could only realise where I was when I extended my hand to touch it. Slow nystagmus was then in evidence, as also was pain. Although the dog had been unable to stand for the last 24 hours, it made several attempts to reach the door during my visit. On two occasions it stood on its hind legs but being unable to walk with the fore legs these were extended forwards and were slid along the

floor. Upon being steadied by the kennelman, the dog reeled over to one side, exactly as a drunken person might do. Temperature and pulse were normal.

On the following morning, the dog was removed to my surgery for radiography of the spine and skull. The temperature then was still normal, pulse 60, heart murmurs quite normal, reflexes not vigorous, sensitivity of the skin much diminished; the dog staggered on progression, resented movement, and was sleepy. Somnolence had been marked throughout. On this morning blindness was not apparent, and only occasionally was nystagmus manifested. Pain also had departed, except when the dog was carried or its legs forcibly flexed. It should be mentioned that erection of the penis had been noted during the worst attack. All these symptoms seemed to constitute a clear clinical picture of cerebellar disease.

I hardly expected to obtain much assistance from a skiagraph, except of a negative (and therefore possibly helpful) character; but some excellent films were obtained which showed positive pathological lesions.

On the accompanying dorso-ventral radiograph one may discern a definite pale shadow occupying a central position in the cranium and deviating posteriorly to the right. This area has been outlined with a dotted line. It was thought that this shadow might have represented a greatly distended ventricle, though whether with air or liquid is a matter of conjecture. The clinical symptoms have certainly been consistent with increased intra-cranial pressure, and one would therefore assume the distension to be due to fluid, since this could continually increase whereas pressure from air in such a situation could not. In addition, one may observe (at the arrow-heads) the presence of abnormal dense shadows, not to be found on any of the skull skiagraphs in my possession with which I have compared this film. I cannot explain what they are, nor whether they have any bearing on this illness. Upon reference to the lateral view of this dog's head, one will see a well-defined circular pale shadow (outlined by dots on the positive, but easily visible without such aid on the negative) and this I assume to be the same cyst or distended space observed in the other illustration.

Acting upon such assumption the line of treatment adopted for this case was a mixture containing pot. iodide 2 grs. and tinct. belladonna 7 minims in water twice daily, together with laxatives.

Three days later there was great improvement in the dog's condition, and when I visited the dog a fortnight afterwards it seemed to have completely recovered.

Ring Slough

A Complication Following the Burdizzo Method of Emasculation

HARVEY S. PURCHASE, F.R.C.V.S.

The Burdizzo pincer castrators are every day being used in various parts of the world. In tropical countries, where "screw-worm" infection myiasis is a common complication of open wounds, this bloodless method of castration is of great value as it allows castrations to be carried out all the year round irrespective of the season.

The author has met with six cases of a curious form of dry skin necrosis forming a ring round the scrotum where the pincers had been used. This condition has been brought to his notice four to eight weeks after the use of the instrument: the Italian and British patterns of the instrument both cause this condition. In each case enquiries revealed that the operation had been carried out correctly. The necrosed area is usually an inch wide and, due to shrinkage, constricts the scrotum. The testes swell and are hard and painful.

After anaesthetisation of the animal (by intravenous chloral hydrate) the skin was severed immediately above the slough. The vessels and cord were gently pulled. The cords were found to be very enlarged and up to an inch in diameter. In one case in which the castration was completed by "scalpel scraping" the animal bled to death. In this condition the cord and surrounding area are highly vascular and blood oozes out in alarming quantities even when the skin only is severed.

If no operative interference takes place, the testes completely necrose, gangrene sets in and the animal dies from the ever-enlarging wound.

It has been found that amputation of the testes using a hot iron to seal every vessel severed is the most satisfactory procedure. The four animals thus treated all recovered.

This ring which forms around the scrotum macroscopically resembles a "sitfast" as found in horses. It is possibly caused by some bacterial infection introduced into the skin in the process of crushing the cords. This is only a hypothesis and there is no experimental or other proof for this opinion. The incidence is very low, these six cases occurring in probably a thousand animals which had been castrated by this method.

Another outbreak of foot-and-mouth disease in the Isle of Wight, the third in just over a week in the Yarmouth area, was confirmed on Monday last at Upper Lee Farm, Thorley, where about 20 cows and a number of pigs were slaughtered.

ANNOTATION

Cultural Methods in the Diagnosis of Bovine Tuberculosis

It will probably be admitted that, in spite of certain advances which have been effected to improve the accuracy of the diagnosis of bovine tuberculosis, the detection of the animal which is an active disseminator of infection, is not always straightforward. Similar difficulties have arisen in human medicine where the main problem is centred around the recognition of tubercle bacilli in the sputa of cases of pulmonary tuberculosis and doubts have been raised as to whether complete reliance can be placed upon a simple microscopical examination unaccompanied by any confirmatory evidence.

Recently, cultural methods have been adopted by a few workers with some measure of success and their findings are the subject of a comprehensive editorial review appearing in the *British Medical Journal*,[1] which is strongly commended to those who are interested in this subject.

The article says: "The examination of smears of suspected material by the Ziehl-Neelsen method has been of inestimable value in establishing a diagnosis of tuberculous disease in the lungs or other organs. But soon after the introduction of the method clinicians realised that in an appreciable proportion of patients it let them down because of the large numbers of tubercle bacilli required to be present in the material examined—estimated by Corper at over 100,000 per c.cm. of sputum, for instance—before bacilli could be detected in the smears. Concentration methods increased the percentage of positive findings. But as by culture an enormous multiplication of bacilli would occur, the possibilities of this method in clinical work were soon being explored. The attempts of Koch and others were unsuccessful because difficulties arose in excluding the growth of secondary organisms. Since 1900, however, the work of Spengler, Piatkowski, Uhlenhuth, Petroff, Petragnani, Loewenstein, Hohn, and K. A. Jensen has led to the perfecting of a method of culture which is now being firmly established in the clinical field. Loewenstein showed that the tubercle bacillus was resistant to high concentrations of acid or alkali; moreover, he prepared a medium, containing egg, asparagine, and Congo-red or malachite-green, on which better and more easily visible growth of the bacillus occurred. Colonies of human bacilli generally appear within twelve to thirty days, bovine colonies not till after thirty days. The characteristics of the colonies of these two types are distinct enough to allow a diagnosis of type to be based on appearance alone, except in isolated cases when animal inoculation is required. Saenz and Costil[2] have recently claimed, moreover, that the date on which the result is obtained can be hastened by the examination of 'microcultures.' Seven or eight days after incubation a platinum loop is passed over the whole of the surface of one of the tubes inoculated (they recommend inoculation of several tubes), without injuring the medium, and any material collected is spread on a slide and stained by Ziehl-Neelsen's method. The tube is then replaced in the incubator. If the result proves negative the same procedure is carried out on the other tubes on the eleventh, fifteenth, and eighteenth days until 'microcolonies' are found, constituted by isolated, or masses of, bacilli. This procedure does not interfere with the ultimate growth of the colonies.

"In this country Evelyn Holmes[3] first drew attention to the value of cultivation in the diagnosis of tuberculosis. Edwards, Lynn, and Cutbill[4] have published some results; and the paper by Dr. C. A. Green, which appears elsewhere in this issue, indicates clearly what may be expected from the method in clinical practice. Among 2,796 specimens of sputum examined 19·7 per cent. were positive for tubercle bacilli by direct film, cultural, or combined examinations. Cultivation alone was successful in 98·3 per cent. of all positive results. As Dr. Green points out, the most significant finding was that only 74·3 per cent. of all positive results were detected by the routine film examination. Repeated examination by separate observers confirmed the absence of tubercle bacilli in the original stained smears of the 25·7 per cent. of sputa later proved positive by culture. The comparative results in pleural effusions, pus, urine, and cerebrospinal fluid were less striking, but still in favour of the method of culture. Correlation of the bacteriological with the clinical diagnosis left little doubt as to the reliability of the method. But it is evident that the practice of the method calls for expert technique and interpretation, and that animal inoculation may be needed occasionally for confirmation. For the errors that may be introduced into the method we would again refer the reader to Saenz and Costil.[2]"

The investigations of Loewenstein and numerous other workers on the growth of tubercle bacilli from the blood stream and various secretions and excretions have played a considerable part in stimulating interest into cultural methods. So far they have found only a limited application in veterinary public health, but they open up possibilities which ought to be considered.

The difficulties associated with the detection of tubercle bacilli in milk are already commonplace and the value of the microscopical method

has been much debated. On the one hand, there are public health officers who have stated that, given the necessary time, the microscopical examination of milk can be depended upon to detect the majority of cases of tuberculous mastitis. In a few instances, a microscopical examination undertaken either by the veterinary official making the clinical examination or by a laboratory which specialises in this type of work, is the sole method upon which reliance is placed. Most authorities agree, however, that more valuable and accurate information can be obtained by a combination of the microscopical examination and the biological test. Thus, Torrance[5] suggests that while adequate facilities should be provided for the microscopical examination of milk, sputa, etc., which should be carried out by the clinician or under his direction, other methods should not be neglected. In Nottinghamshire, the routine examination of dairy herds is supplemented by the biological assay of mixed milks. Torrance says that "the system of checking the clinical examination in this way engenders greater clinical efficiency and tends to the collection of more "individual" samples for microscopical examination which results in the detection of a greater number of tuberculous udders during the routine inspection." Davidson[6] considers that "microscopical examination of samples by the veterinary officer examining the cows is not essential to the success of routine clinical examination of herds." He points out that "more work is desirable on the pathogenicity of samples in which acid-fast bacilli morphologically tuberculous are demonstrated microscopically." He adds that in Staffordshire samples from cows reported positive by the microscopical method have been submitted to the biological test and in a considerable percentage the results have been negative.

Such discrepancies are exceedingly vexing to the veterinary officer, but they should occasion no surprise. Amongst other explanations of these aberrant results, there can be no doubt that acid-fast bacilli, which have a tinctorial resemblance to tubercle bacilli but which are not of the bovine variety, do appear in milk samples. Such organisms may be of the avian type, possibly Johne bacilli or simple acid-fast saprophytes. With practice, it may be possible on morphological grounds to state with a fair degree of certainty that such organisms are not tubercle bacilli, but even the most experienced worker is bound to make occasional errors. The detection of characteristic cell groups in milk samples has been of considerable assistance in reducing the errors inherent in the microscopical method. This technique, which was carefully investigated by Matthews[7] and by Torrance,[8] has yielded very favourable results in the hands of Maitland.[9] In a recent paper, Locke[16] has collected the results of the examination of a series of milks by this method and has reported that when quarter sampling of suspected cows is adopted, there is a very close correlation between the microscopical and biological findings. It cannot be questioned, however, that the biological test is of the greatest service in differentiating bovine tubercle bacilli from the harmless acid-fast bacilli and provides the most certain method of safeguarding the public from the dangers of tuberculous milk. The comparatively lengthy time which is required to secure a diagnosis is, nevertheless, a serious drawback and it would be a great advantage if this period could be shortened by cultural methods, either alone or in conjunction with the biological test.

Up to the present, little information is available as to the comparative merits of this method. According to Ruddock-West[10, 11] 1,742 samples of milk from single cows which were negative on microscopical examination, were subjected to a cultural examination. The sediments after centrifugation were treated with sulphuric acid, neutralised with caustic soda, washed and sown on to a modified Loewenstein-Jensen medium and incubated for 14 days. Of these samples 76 which were negative microscopically, yielded positive cultures and in 68 the results were identical with the biological test. Trautwein[12] has examined 11,701 samples of various secretions. Positive results were obtained with 2,279 sputa, 137 milks and 62 uterine discharges. The experiments were performed in duplicate—biological and cultural—with the result that 27 per cent. were positive to the biological and 28 per cent. to the cultural method. Ritter and Nothdurft[13] have also reported favourably on the cultural examination of sputa and have noted that out of 100 samples which were positive microscopically, 98 were positive culturally. Hedström[14] has mentioned that 172 samples of sputa which were negative microscopically but positive on guinea-pig test, were cultured on Loewenstein's medium after treatment with sulphuric acid: 67 (37·4 per cent.) were positive and 83 (46·3 per cent.) were negative, while in 29 contamination rendered a diagnosis impossible. These figures would suggest that the cultural method falls far below the biological test in accuracy for the detection of tubercle bacilli. In connection with cultural work, Witte[15] has raised a small but important point. He remarks that certain of the media used in human work are unsuitable for bovine milks or sputa because they contain glycerine which is, of course, inhibitory to the bovine tubercle bacillus. He suggests the medium of Petragnani as the most valuable for the purpose.

Cultural methods have not yet been used on

a sufficiently wide scale to determine whether they are likely to prove of greater or less value than those in current use, but further investigations are undoubtedly desirable. It must be admitted that the manipulations which are required in order to prepare a suitable material for the inoculation of culture media, are a distinct drawback. In many laboratories, staffs already inadequate, are being called upon to deal with increasing numbers of milks year by year. Undoubtedly the tendency must be in the direction of the selection of the simplest technique. In the present state of our knowledge, it would seem unlikely that the biological test will be displaced for routine purposes. On the other hand, cultural methods may furnish an answer, at any rate in the case of positive samples, at a much earlier date than the biological test. From the point of view of the veterinary officer responsible for the detection of the animal which is excreting tubercle bacilli, this is a prime consideration and any method that will shorten the period of waiting will be wholeheartedly welcomed. For this reason, it is hoped that the cultural examination of selected individual samples from suspected animals will be taken up by those laboratories which possess the necessary facilities.

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R. E. Glover.

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ABSTRACTS

["**Results of Micro-biological Studies of Malignant Tumours.**" (Trans. title.) Gerlach, F. (1937.) *Wien. klin. Wschr.* **50.** 1603. 6 figs.]

The author reports that in carcinoma and sarcoma of men and animals he has observed "regularly," "virus" or "elementary" bodies which form part of the "development cycle" of a filterable micro-organism similar in its appearance and cultural behaviour, in fluid and on solid media, to the micro-organisms associated with bovine pleuropneumonia and agalactia. The micro-organism can, like that of pleuropneumonia, be propagated also on the chorio-allantoic membrane of hen eggs. As a general rule the inoculation of cultures of Gerlach's micro-organism into experimental animals led to the development of an inflammatory exudate in the body cavities in which the micro-organisms, especially the "elementary bodies," could be seen in large numbers, but no clinical symptoms were observed. In a small percentage of animals, 14 out of a total of 342 inoculated with cultures, malignant tumours developed. However, the author expresses the opinion that in view of the fact that in the majority of cases in inoculated animals the micro-organism can remain latent for lengthy periods, there must be some other factor responsible for the production of the tumours. He considers the problem worthy of further investigation.

[This micro-organism of Gerlach's appears to belong to a group of filterable micro-organisms which have been recovered from various sources, *e.g.* (1) the group of filterable saprophytic micro-organisms isolated from sewage by Laidlaw, P. P., and Elford, W. J. (1936) *Proc. Roy. Soc. B.* **120.** 292-303; (2) the filterable micro-organisms isolated from dung, earth, etc., by Seiffert, G. (1937) *Zbl. Bakt. Abt.* 1. Orig. **139,** 337 and *idem* **140,** 168 (according to Orskov, J. (1938) *Zbl. Bakt. Abt.* 1. Orig. **141,** 229, Laidlaw and Elford's and Seiffert's micro-organisms are morphologically and culturally similar); (3) the filterable micro-organisms "*Asterococcus canis*" types I and II recovered from the nasal secretions and lungs of dogs with distemper by Shoetensack, H. M. (1934), Kitasato *Arch. Exp. Med.* **11,** 277. (1936) *idem* **13,** 175 and 269; (4) the filterable micro-organism L1 isolated from cultures of *Streptobacillus moniliformis* (Levaditi) by Klieneberger, E. (1935) *J. Path. Bact.* **40,** 93, and (1936) *idem* **42,** 587.

All of the above group of filterable micro-organisms resemble in their morphological and cultural behaviour those associated with (5) agalactia and (6) bovine pleuropneumonia. The only way in which Laidlaw and Elford's

micro-organisms appear to differ from (3), (4), (5) and (6) is that in a limited number of experiments they did not seem to survive for an appreciable time when inoculated into experimental animals such as mice.]

I. A. G.

* * * * *

[Some Operations on the Genital Organs in Horses. Möller Sörenson (1937.) *Münch. tierärztl. Wschr.* April 1st. 145-151.]

In affections of the genital organs and surrounding structures in the gelding and stallion, the primary cause of the condition may be hard to find as the various folds and natural cavities tend to mask it. Again, any swelling in this area will cause pressure on the other structures, and may give rise to a greater oedema, accumulation of normal secretions, retention of urine, or even superficial necrosis.

The diagnosis and treatment of several cases of this nature are given. In most cases it was necessary to narcotise and cast the animal before a proper diagnosis could be made. Initial treatment in all cases consisted of constant bathing with warm antiseptic lotions. The necrotic and ulcerated areas were curetted and dressed with strong astringent lotions. In the majority of cases recorded this treatment was not completely successful, although some improvement was noticed. More radical measures were therefore adopted, the nature and technique of which are described in full. In cases where the penis was in a condition of paraphimosis or phimosis due to pressure of the sheath, that portion of the sheath where the constriction was most marked was incised, so that pressure was relieved and the penis was allowed to regain its normal position. Following on this, it was sometimes necessary to keep the penis in position by means of a suspensory bandage, or a purse string suture, around the preputial orifice.

A case of abscess formation in the spermatic cord following castration, and one of hydrocele with paraphimosis, are recorded. In the first case the spermatic cord was removed; and in the latter, the stallion was castrated and later, as no improvement occurred with the paraphimosis, the penis was amputated.

The only operation described in connection with the genital organs of the female is a case of recto-vaginal fistula in a mare. This case was of four weeks' standing and due to injury at the time of foaling. The wound consisted of a tear in the upper commissure of the vulva, and in the portion of the perinaeum immediately above, which extended forwards, upwards, and to the left through the last three inches of the vagina and so into the rectum. The sphincter ani was not affected, but the vagina and rectal mucous membranes were united. The wound was treated in the following manner. The connection between the vagina and the rectum was first broken down with a knife introduced through the wound in the vagina, and the edges of the wounds dissected out. A pair of farrowing forceps, used as a speculum, was then passed into the rectum and partially dilated so as to increase the lumen. The wound was then sutured with a long curved needle and silk. The speculum was now introduced into the vagina and the vagina sutured in exactly the same way, so that both wounds were sutured from within the lumen of their cavities. Finally, the perineal wound was sutured from outside with silk. The operation was performed in the standing position under epidural anaesthesia, chloral hydrate *per os* having been administered previously as a narcotic.

C. W. O.

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[The Shape and Position of the Dog's Stomach. Zietzschmann, O. (1938.) *Berl. tierärztl. Wschr.* 10. 138-141.]

The shape and position of the dog's stomach depends on its contents, and the degree of peristalsis and digestive activity occasioned by these contents. The empty stomach is completely anterior to the line of the last rib and all but its posterior surface is enclosed by the liver. The greater curvature faces downwards and is suspended above the coils of the small intestine. As the stomach increases in size the most marked enlargement is noticed in the fundus. In a partially filled stomach the left extremity of the fundus is more dorsal; the anterior surface is convex, but not necessarily more anterior as the long axis of the stomach swings backwards; a portion of the left side extends backwards beyond the level of the last rib and the greater curvature, which inclines slightly backwards, is nearer the ventral abdominal wall. In a full stomach, the anterior surface is markedly convex and may extend to the level of the eighth or ninth rib in spite of the backward rotation of the long axis of the stomach; a considerable portion extends beyond the level of the last rib, and the greater curvature is in contact with the abdominal wall. A stomach artificially filled to its greatest capacity produces a condition resembling the abdomen of a ruminant.

Whatever the condition of the stomach the direction of the cardia does not vary. It passes, not directly backwards, but towards the left opening into the fundus. The shape and position of the pyloric part varies the least and is only affected by direct pull or pressure. The pyloric extremity is always more anterior and ventral than the oesophageal extremity, so that

the anterior surface of the stomach faces downwards and to the left, and the posterior surface upwards and to the right (Fig. 1).

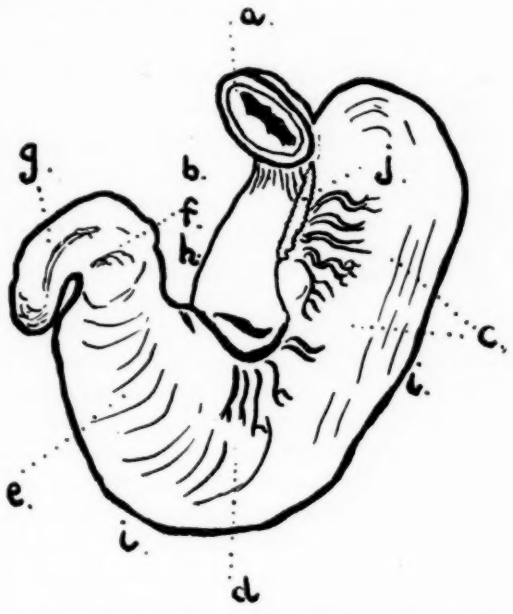

FIGURE 1.—Partially filled stomach. Anterior view. (*a*) oesophagus; (*b*) cardia; (*c*) fundus; (*d*) sinus (connecting portion between fundic and pyloric parts); (*e*) pyloric part; (*f*) pylorus; (*g*) duodenum; (*h*) lesser curvature; (*i*) greater curvature; (*j*) attachment of gastro-hepatic omentum.

FIGURE 2.—Empty stomach. Anterior view. The letters are the same as in figure 1.

Figure 2 indicates the changes in a fully contracted stomach. Zietzschmann obtained these results from specimens fixed in the natural position by the inter-arterial injection of formalin. [This article demonstrates that it is impossible to give an accurate anatomical position of the stomach.] C. W. O.

[**Sunburn in a Cow.** CHRISTENSON, I. (1938.) *Münch. tierärztl. Wschr.* **89.** 9. 101-102. (Trans. from *Svensk. Veterinartidskrift.* **42.** 305. by E. BASZ.) March 2nd, 1938. 2 photographs.]

In June, 1928, a three-year-old black and white cow of Lowland breed was on pasture land with a sandy and clay soil, the pasture being rich in white (Swedish) clover, but poor in lime and phosphates. After a week of strong sunshine, the cow became ill with loss of appetite, staggering gait, temperature of between 104° and 105° F., and pulse of 100 to 120 beats per minute. The animal exhibited symptoms of muscular tremors as in grass tetany.

Treatment consisted in placing the cow in a byre and administering stimulants and laxatives. The result appeared to be good at first but then followed the skin necrosis. All over the white patches the skin came off, mastitis and a septicaemia supervened, and so the animal was slaughtered.

The following year two similar cases occurred in neighbouring farms, on similar land, but both were milder, and treatment consisted in removal of the cows to a byre, feeding with laxatives, mineral mixtures, and the administration of stimulants, the white patches of skin being bathed daily with lukewarm water, until the animals recovered.

The author believes these animals may have developed a sensitisation after eating Swedish clover, but points out that he has frequently had to treat various "deficiency diseases" on these farms, and that five years ago, on his advice the land was dressed with lime and phosphates, whilst mineral mixtures were fed to the animals. Since then sunstroke has not occurred in spite of the fact that last summer was richer in sunshine in that part of the country, than for many years previously.

D. J. A.

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[**Beri-beri in the Dog.** CARLSTRÖM, B. (1938.) *Skand. Vet.-tidskr.* **28.** 3. 218-224.]

An account of two cases of vitamin B_1 deficiency in dogs. In one case the symptoms were: roughness of the coat (probably due to slight oedema of the skin); tenderness in the musculature, especially of the neck muscles; ataxia; inability to stand upright; head held low. In the second case the symptoms were similar with the addition of oedema of all limbs, circular movements to the right, and paresis in the left fore leg. The symptoms rapidly disappeared following the subcutaneous or intravenous injection of 2 to 5 mg. of aneurin. (Vitamin B_1 is now known as aneurin, vitamin B_2 as nicotinic acid.)

E. G. W.

The Veterinary Record

July 30th, 1938.

Veterinary Services in the Colonies

SINCE its recent formation the Advisory Committee on Oversea Services has been actively engaged in reviewing the conditions associated with the Colonial Veterinary Services. In this review the committee has been fortunate in having a mass of material received by correspondence or given personally by those who have had actual experience in the Colonies.

From the results of this enquiry, a short report of which was made to the Council, N.V.M.A., at its recent meeting in Edinburgh and which will be published in our next issue, it is patent that, in certain ways at least, the service has been undergoing a period of retrogression, which has been steadily sapping its vitality and the enthusiasm of its members. The recruitment has fallen off and instances of established officers leaving the service prematurely, even at considerable personal sacrifice of pension rights, are not infrequent. This condition of dissatisfaction is due partly to the salary scales, to the absence of a sufficiently attractive long scale, and to the low salaries and scarcity of posts offered in super-scale positions, but it is also due in no small measure to other factors associated with the service. The financial provision made for the work to be undertaken by the services in the different territories is not infrequently grossly inadequate for the tasks to be accomplished; the number of veterinary officers is too few to enable progressive policies to be followed, and is frequently insufficient, without overworking the individual officers, even for the pursuit of a conservative and unenlightened policy of holding the gains previously made. Schemes suggested to Colonial Governments or to Headquarters at home for the prosecution of a more active policy fail to fructify. Rightly or wrongly, these facts have suggested that the Colonial Veterinary Service receives no sympathetic consideration or understanding at the Colonial Office. Certainly the failure to appoint a successor to the late Mr. R. E. Montgomery as Veterinary Adviser to the Secretary of State for the Colonies lends support to this suggestion, particularly in view of the fact that allied departments have two advisers each.

The N.V.M.A. has been much concerned with this retrogressive tendency on the part of the Colonial Veterinary Services in the past and has upon several occasions put its views before the Secretary of State or his advisers. Unfortunately this advice has been neglected and matters have progressively deteriorated. The Association, however, is determined to press the case for the adjustment of conditions so that increased efficiency in the work of the Colonial Veterinary Service may result. In working to this end, however, it is most anxious to collaborate fully with the Colonial Office. Fortunately such collaboration has begun and may develop shortly into a true collaboration similar to that which has been created between the Ministry of Agriculture and Fisheries and the profession. The Council of the Association has decided to support fully the decisions of its Advisory Committee on Oversea Services in the strong hope that its action will lead to the better utilisation of the services of the profession in the Colonies and to the re-establishment of a service which is proud of the work it does and of the fact that this work is followed with appreciation and understanding by the authorities and the profession, at home and abroad.

PIG INDUSTRY GROWTH

"Many people probably fail to realise the important place which pig-breeding now occupies in the general scheme of farm production," says the *North British Agriculturist*, and continues: "We can well remember the old days when the pig was regarded with little concern on the farm, but it is a very different proposition now. At the recent shows of the 'Highland' and 'Royal' the long hours occupied by the judges in allocating the awards were suggestive of the important place now occupied by the pig industry at our stock-breeding shows. In this connection it may be interesting to know that in every £9 earned by the farmers of this country, £2 comes from dairy produce and £1 from pigs. Estimates of the value of agricultural produce in England and Wales published in the 'Journal' of the Ministry of Agriculture show that pigs at nearly £25,500,000 account for more than one-ninth of the total. They are bettered only by milk and dairy produce and cattle, and are worth £10,000,000 more than sheep and lambs or eggs. None of the farm crops, even potatoes at £14,500,000 and wheat at £6,700,000, come anywhere near this figure. In 1936-37 figures showed a 12 per cent. increase over the previous year for pigs, 6 per cent. for cattle and calves, 4 per cent. for sheep and lambs, 3 per cent. for milk and dairy produce; and declines of 8 per cent. for poultry and 2 per cent. of eggs."

REVIEW

[**Erosion and Soil Conservation.** Bulletin 25—Herbage Publication Series. Imperial Agricultural Bureaux. Price 5s.]

This exhaustive account of contemporary soil erosion contains an impressive body of evidence gathered from all over the world, often from sources which would otherwise be inaccessible, by Official Correspondents of the Imperial Bureau of Pastures and Forage Crops, and the Imperial Bureau of Soil Science. By its publication the Imperial Agricultural Bureaux have served a further useful purpose, and have added another most valuable Bulletin to the already long list.

To the ordinary British layman the general problem of soil erosion and its devastating effects are probably merely matters of hearsay. The appalling consequences of widespread erosion cannot be appreciated by any who have not seen its effects in tropical countries. It is comparatively common knowledge that vast areas of what are now arid desert areas, where, apart from sudden torrential storms, little or no rain may fall for years at a time (*e.g.*, the Sahara in Northern Africa) were fertile tree-covered lands, well-watered and in many cases widely cultivated some 3,000 years ago. To the same average layman, however, information may hardly seem believable that within the life-time of many, even within the last two decades, vast tracts of country, once bearing an abundant and luxuriant vegetation, are now barren and arid, cut into deep gulleys by rushing torrents for a brief period during " the rains " and during the rest of the year carrying little but patchy scrub, and in many parts not even that. Yet these are the facts repeated time and time again within the pages of the Bulletin.

The function of a reviewer is not to abstract a publication, but it may add to the interest for our readers if we depart somewhat from the usual type of review and attempt to give some of the basic reasons which underlie the process of soil erosion as they have occurred and are occurring.

The devitalising effects of soil erosion almost invariably commence with widespread deforestation. The removal of trees to meet demands for timber, operates in a number of different ways; the water-retaining powers of the soil are lowered and then practically destroyed; the shade afforded by standing forests is removed and evaporation is hastened; wind-breaks are removed, and the climate gradually changes, becoming hotter and hotter. Pulverisation of the surface layers of fertile soil follows—owing to the alternate exposure to hot conditions during the day and cool or cold conditions at night. The winds then lift this surface powdery soil and remove it, exposing the deeper infertile strata, while heavy rains unchecked by a fibrous top covering, wash it away *via* the rivers into the sea. It may be permissible to quote a few lines from Ferrari to lend emphasis to what has been said. He says:—

> " The change that the climate in Persia underwent after the destruction of its numerous and majestic parks is well known; its territory was transformed into movable banks of white sand, the climate became arid and suffocating, springs of water at first decreased and finally disappeared altogether. Egypt, with the devastation of its forests, saw a decrease in rains, in soil fertility, and in uniformity of its climate. Palestine, at one time covered with valuable forests and fertile pastures, possessed also a cool and moderate climate; to-day its mountains are sadly denuded, the rivers almost dry and crop production reduced to a minimum."

This, then, is the general picture which applies in greater or lesser extent over a very large part of the surface of the earth.

It must not be thought, however, that soil erosion is merely a matter of deforestation and that its control is one of afforestation. The denudation of surface vegetation other than trees can play a very important and no less serious part. Faulty methods of farming, overstocking and consequent destruction of grazing pastures, lack of any system of conservance of fertility by manuring (not fertilising), the absence of proper rotational grazing, the herding of goats and the making of stock-tracks up and down steep slopes, each acts as a factor encouraging erosion.

It would be an impossible task in this review to give anything like an exhaustive picture of the world distribution of active erosion, but certain areas call for special mention principally to indicate the catastrophic nature of the process wherever it is allowed to progress unchecked. Probably the most dramatic and spectacular effects of immediate erosion are to be seen in the United States. There the mechanisation of agricultural procedures has played perhaps a major part in hastening erosion. It is difficult to obtain a real picture of the magnitude of the problem this country has to face, but the following figures quoted from the Soil Conservation Service in 1934 may give our readers some indication.

Area essentially destroyed for further tillage —109,000,000 acres.

Area with $\frac{3}{4}$ or more of the top-soil and some sub-soil lost—160,000,000 acres.

Area with $\frac{1}{4}$ to $\frac{3}{4}$ of the top-soil lost—791,000,000 acres.

Area with gulleying—moderate or severe—111,000,000 acres.

Area with little or no erosion—578,000,000 acres.

It will be agreed that these are staggering figures, and the concern felt in the United States can be realised. In fact, the problem has long ceased to be one concerned with the farmer; its enormous importance to industry, national health, unemployment, politics, etc., makes it a matter for the whole nation acting in co-operation.

Though nowhere within the Empire are we faced with problems even approaching the magnitude of those in America, yet there is already cause for alarm. Western Canada, Australia, many parts of Africa, India, and innumerable smaller areas in other parts of the Empire are facing a progressive diminution of the area available for cultivation and stock raising through gradual encroachment of the erosion, drifting or washing away of fertile soil.

Agricultural greed, thoughtlessness, economic needs, or wanton destruction of forest areas is liable to be followed by the threat of erosion in any part of the world.

Governments and peoples everywhere are awakening to the fact that in order to maintain adequate areas of agricultural production, a long-term policy is necessary. The land is held in trust for future generations, and efforts must be made to pass it on unimpaired in fertility.

The Bulletin admirably recapitulates and summarises the measures which are being undertaken to prevent or control erosion in different parts of the world, but since these are so diverse and specialised, they will not be referred to here. Those interested are advised to obtain the Bulletin, and even if not intimately concerned with any aspect of actual erosion control, they can be assured of a most fascinating chapter in the progress of man's war against elemental Nature.

A Reuter message from Wellington (N.Z.) says: A motion advocating that direct importation of livestock from countries which are subject to foot-and-mouth disease should be permitted subject to certain precautions was rejected by 31 votes to 23 at the Farmers' Union Conference here. One of the precautions mentioned was that stock must come from an area which had been free of disease for a year. The Conference decided, owing to recent outbreaks of foot-and-mouth disease abroad, to urge the Government not to raise the present restrictions.

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The Epping Forest Committee of the City Corporation is about to expend a further £532 in the construction and maintenance of horse rides in the forest, and £500 on a motor-tractor and necessary accessories for rolling and draining the drives.

REPORT

Bengal

REPORT OF THE CIVIL VETERINARY DEPARTMENT AND OF THE VETERINARY COLLEGE FOR THE YEAR 1936-37*

I. *Civil Veterinary Department* (P. J. Kerr).—The staff consisted of a director and veterinary adviser, two assistant directors, nine veterinary inspectors and 139 veterinary assistant surgeons. It is proposed to increase the number of inspectors. The restriction placed on travelling for financial reasons is stated to result in loss of efficiency. The veterinary investigation officer was placed in charge of the Veterinary Vaccine Section and another appointment was made to take his place.

The mortality from contagious diseases was the highest during the last five years. There was, however, a decrease in the number of deaths from rinderpest. There was a widespread outbreak of anthrax and a large number of deaths from parasitic diarrhoea in goats. The outbreak of anthrax was controlled by inoculation with spore vaccine. An outbreak of glanders occurred involving the death and destruction of 22 animals. Preventive inoculation was carried out in 1,351 outbreaks and 355,079 animals were inoculated. The staff of veterinary assistant surgeons visited 20,594 villages and treated 217,155 cases.

There were 56 hospitals and dispensaries at work in which 117,640 cases were treated.

The Vaccine Section was opened on a permament basis during the year. Its main function is to make a supply of goat tissue vaccine but it acts also as a cold storage depôt for the distribution of other sera and vaccine to the districts. In addition, the clinical diagnosis of slides and specimens from the districts is carried out.

II. *Bengal Veterinary College* (J. M. Lahiri).—The staff consisted of the Principal, eight lecturers (including the Vice-Principal) and 14 assistants.

There was an increasing demand for admission from places in and outside India. The number of students at the end of the year was 184, of whom 75 belonged to Bengal.

The results of the annual examinations were satisfactory.

The Raymond Research Laboratory and the Department of Epizoötic Diseases of Animals in Calcutta, which are under the control of the Principal, continued their usefulness.

There were 17 outbreaks of glanders in Calcutta and suburbs. G. K. W.

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*High Commissioner for India, India Office, Aldwych, W.C.2. Price 6d.

N.V.M.A. DIVISIONAL REPORTS

Southern Counties Veterinary Society

MEETINGS AT SALISBURY AND BLANDFORD

Annual General Meeting*

The 54th Annual General Meeting of the Southern Counties Veterinary Society was held at the Red Lion Hotel, Salisbury, on Friday, March 18th, at 2.30 p.m.

The President, Mr. J. F. D. Tutt, F.R.C.V.S., was in the chair, and other members present were Messrs. N. S. Barron, H. C. Rockett, F. Beckett, E. Wallace, J. B. White (Hon. Treas.) and H. S. Caldwell (Hon. Sec.). Visitors present were Messrs. D. W. Menzies, J. R. Hewer and Esmond Brown.

The minutes of the last meeting, as printed in the *Veterinary Record*, were read and confirmed.

Apologies for absence were received from Sir Frederick Hobday, Messrs. G. P. Male, A. Spicer, G. H. Livesey and G. W. Begg.

Membership.—The Hon. Secretary reported the receipt of letters from Mr. Milligan asking for his resignation to be put before the meeting as he is leaving Dorset for London, and from Mr. Edie tendering his resignation on retiring from practice.

The resignations were accepted with regret.

Major Devonport, who has taken the practice at Christchurch, was nominated for membership by Major Stewart Wood.

R.S.I. Congress.—The meeting decided not to send a delegate to the Sanitary Institute conference.

Reports

The Hon. Secretary and the Hon. Treasurer then presented their reports, which were adopted, as follows :—

Hon. Treasurer's Report.—The accounts of the Society for the last year balanced favourably, if the abnormal expenses of the Congress "At Home" were excepted. This expense had been rather heavier than anticipated and this had been met temporarily out of the deposit account. About a half of this expense had been made up by special donations made by the members.

On the year's current account there had been a small credit balance and it was agreed to transfer this to the deposit account.

The Hon. Treasurer gave a statement of the accounts for the past year which were then adopted by the meeting.

It was also agreed to renew the annual donations to the Victoria Veterinary Benevolent Fund, the Library Endowment Fund, and the National Horse Association.

Hon. Secretary's Report.—Four meetings were held. The March meeting took place at Salisbury, when Major Hamilton Kirk read a most comprehensive paper on abdominal distension in small animals ; the discussion was opened by Major Facer. The June meeting was held at Bournemouth and comprised discussions on Veterinary Public Health Services, proposed alterations to rules of the Society, and a paper on clinical subjects by Mr. B. Gorton. At the September meeting, at Winchester, Professor Wright gave a talk on dystokia in the bitch ; I am sorry to say that this admirable dissertation has not yet been published.* The December meeting was held in Southampton and the film on the treatment of fractures in the dog and cat was projected. Mr. P. M. Sutton, of the R.V.C., gave an introductory address and replied to the discussion.

I am glad to report that, in spite of the greatly reduced area of the division, the membership keeps about the same and that attendance at meetings has not suffered.

Election of Officers

The officers were elected as follows : *President*—Mr. F. Beckett ; *Vice-Presidents*—Mr. Tutt and Major J. Stewart Wood ; *Hon. Treasurer*—Mr. J. B. White ; *Hon. Secretary*—Mr. H. S. Caldwell ; *Council*—Messrs. N. S. Barron, G. N. Gould and W. F. Maynard ; *Representative to the Council of the N.V.M.A.*—The President.

Mr. J. F. D. Tutt, the retiring President, expressed thanks for the support he had had during his year of office. The Society, he said, had been very fortunate in having three very good Secretaries—first Mr. Gould, then Mr. White and now Mr. Caldwell. He was sure they would give the same support to Mr. Beckett as they had to him.

The Hon. Secretary, paying a tribute to the work the retiring President had done, said Mr. Tutt had been President of the Society for five years, and during those five years they had had excellent papers and very good meetings, and attendances had increased. At one time they held meetings in London and Brighton and elsewhere, but the Society now seemed to have settled down in the area they now served, and the meetings had got better and bigger. The retiring President had done good service to the Society, and he wished to propose a vote of thanks to Mr. Tutt for all he had done while occupying the chair.

*Received for publication May 30th, 1938.

*This address has not yet been received for publication.—*Editor.*

The Hon. Treasurer seconded, and the thanks were carried with acclamation.

Mr. F. Beckett, the new President, then took the chair. He thanked all present for electing him President, and humorously remarked, "for one year." He expressed the hope that he would be able to get people there who would give good papers, and said that he would do his best to keep the Society alive. If he could do half as well as Mr. Tutt had done he would be satisfied.

Paper.—Mr. D. W. Menzies, M.R.C.V.S., then read a paper on "Diseases of Sheep in the South West." [This paper is reproduced, together with a report of the ensuing discussion and of the essayist's reply, at the commencement of this issue.—*Editor.*]

The President expressed the thanks of the members to Mr. Menzies for his paper and replies to the questions raised.

Next Meeting.—It was agreed to hold the summer meeting at Blandford, when demonstrations would be given by Mr. Beckett.

The meeting then closed and tea, kindly provided by the Salisbury members, was taken.

H. S. Caldwell, *Hon. Secretary.*

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Summer Meeting*

The summer meeting of the Southern Counties Veterinary Society was held on June 10th at Berkeley Lodge, Blandford, in response to the kind invitation of the President, Mr. E. F. Beckett, F.R.C.V.S. The following members attended: Messrs. E. F. Beckett, H. C. Rockett, J. S. Wood, K. I. Marshall and H. S. Caldwell, with Miss Scutt and Mr. A. D. Campbell as visitors.

The reading of minutes was postponed until next meeting.

Apologies for inability to attend were received for Majors Sir F. Hobday, E. Wallace and C. Davenport, Messrs. A. Spicer, G. P. Male, J. F. D. Tutt, W. P. Blount, J. B. White, and N. S. Barron.

Refresher Courses.—The Secretary reported the decision of the Council regarding the request of the N.V.M.A. that Divisions should arrange refresher courses in poultry disease and husbandry. The meeting approved the decision that no course should be held by this Society, but that the Secretary should notify anyone interested of the arrangements made by neighbouring Divisions, whose courses they could attend if they so desired.

International Veterinary Congress.—The donation of two guineas to the appeal for funds for expenses of reporters at the International Veterinary Congress was confirmed.

*Received for publication July 9th, 1938.

Membership.—Major C. Davenport, O.B.E., F.R.C.V.S., of Christchurch, was unanimously elected a member of the Society on the proposal of Major J. S. Wood, seconded by Mr. H. C. Rockett.

Mr. A. D. Campbell, of Dorchester, was nominated for membership.

Demonstrations

Mr. Beckett, in welcoming the meeting, said that instead of a presidential address he had arranged demonstrations of a few measures which were of great help in every-day practice. First of all there was the use of the stomach tube in cattle. This was a most useful method in almost every case requiring medicinal treatment, and he described the utility of the apparatus in the several phases of its service—stomach tube, douche, enema.

There were four cows requiring the passage of the tube, and, after the President had demonstrated his technique, other members were able to show their methods in the manipulation of the instrument in the other subjects. The indications for its use in horses were explained and Mr. Beckett demonstrated on one of his hunters.

The taking of blood samples was then discussed by all present, and it was the general opinion that this was one of the duties which would increase greatly in the future. A variety of methods and equipment were described, but Mr. Beckett said that his preference was for the jugular vein, using a cord round the neck and a large needle, and he showed how rapidly he could obtain samples. Other members followed in collecting samples by the same method.

Epidural anaesthesia in cows was also described and demonstrated. In the ensuing discussion individual preferences as to site, needle and anaesthetic were noted, and questions on spinal injections in other animals raised.

Mr. Beckett exhibited a most interesting case of a weight-carrying hunter, which he had operated on, to correct a contracted foot.

Several of the members inspected the fine riding school and premises and congratulated the President thereon.

The meeting terminated and the discussions continued informally during tea. The thanks of all were expressed to the President for his efforts that afternoon and for his kind hospitality.

It was regretted that so many members had found it impossible to attend and had missed a most interesting and enjoyable afternoon. It was realised that pressure of work was the reason which had prevented attendance at such an attractive meeting.

H. S. Caldwell, *Hon. Secretary.*

South-Eastern Veterinary Association*

ANNUAL MEETING AT MAIDSTONE

The 26th Annual General Meeting of the South-Eastern Association (Division, N.V.M.A.) was held at the Royal Star Hotel, Maidstone, on April 7th, 1938.

The President (Mr. F. Crowhurst) was in the chair and the following Fellows and visitors signed the attendance book: *Fellows*—Messrs. E. P. Barrett, J. W. Bruford, J. G. Cattell, F. A. Crowhurst, A. T. Crowther, J. B. Dier, Major J. G. E. Gallie, Capt. F. C. Gillard, Messrs. S. F. J. Hodgman, H. P. Hogben, R. V. Isherwood, Capt. J. F. Macdonald, Messrs. D. J. Macpherson, F. Marks, C. W. Perrin, G. S. Peyton, Major L. P. Pugh, Major G. E. Oxspring, Messrs. C. Roberts, F. B. O. Taylor, Mrs. A. Thomson and Mr. A. Thomson (Hon. Secretary); *Visitors*—Messrs. H. Birkett, R. R. Bugg, Dr. J. T. Edwards, Messrs. T. G. Llewellin Evans, T. B. McClure, H. H. Skinner and Miss C. M. Scott.

The minutes of the previous meeting were read and signed as correct.

Nomination.—Capt. A. J. Beeson, M.R.C.V.S., Maidstone. Proposed by Professor Dalling; seconded by Hon. Secretary.

Elections.—The following were elected Fellows of the Society: Major J. G. E. Gallie, Capt. J. F. Macdonald, Mr. D. Macpherson and Mrs. A. Thomson.

Resignations.—Letters were read from Major C. Davenport and Mr. S. B. Vine intimating their wish to resign from the Association owing to leaving the district. The resignations were regretfully accepted.

Correspondence. — Letters of apology for absence were received from the following: Mr. W. P. Blount, Professor Dalling, Sir Frederick Hobday, Dr. A. D. McEwen, Dr. R. F. Montgomerie, Mr. Arnold Spicer and Mr. Henry Taylor.

A letter from the Chairman and Hon. Secretary of the British National Committee, Thirteenth International Veterinary Congress, *re* applications for membership of the Congress was read and also one requesting the help of the Division in connection with a fund for the purpose of providing financial assistance for Reporters attending the Congress.

The matter was discussed but no action was taken.

A letter received from the General Secretary, N.V.M.A., in connection with the Memorandum regarding R.S.P.C.A. Clinics was read to the meeting.

*Received for publication July 30th, 1938.

Election of Office Bearers

The following Fellows were elected as office bearers for the ensuing year: *President*—Mr. F. Crowhurst; *Vice-Presidents*—Dr. A. D. McEwen, Messrs. A. Spicer, H. P. Hogben, C. Crowhurst, E. Ebbetts and J. G. Cattell; *Hon. Secretary and Treasurer*—Mr. A. Thomson; *Council*—Messrs. Crowther, Dier, Gillard, T. F. Hogben, Marks, C. Roberts and Major Oxspring; *Hon. Auditors*—Messrs. H. Taylor and A. Whicher; *Representatives on Council, N.V.M.A.*—Dr. R. F. Montgomerie, Mr. A. Spicer and the Hon. Secretary; *Representative on V.V.B.F. Council*—Major G. W. Dunkin.

Secretary's Report

Mr. Thomson then presented his report for the past year as follows:—

During the year three ordinary meetings and one special meeting were held. The first, the Annual General Meeting, took place at Maidstone, on February 25th, 1937. Two important papers (1) "The Periodic Classification of Bovine Toxaemias," by Captain J. R. Barker, of Hereford, and (2) "Dry Distemper in the Dog," by Major L. P. Pugh, were read and discussed. Immediately following this meeting a social function in the form of a "Cocktail Party" to mark the Silver Jubilee of the Association was enjoyed by a large gathering of Fellows and their friends. Official visitors to the party included Mr. H. R. Pratt-Boorman of the "Kent Messenger," Mr. and Mrs. Gerald Boorman (Kent County Council), Mr. and Mrs. Arnaud (Public Analyst and Official Agricultural Analyst for the County of Kent), and Lieut.-Colonel B. S. Lake (Veterinary Surgeon to the R.S.P.C.A.).

The second meeting was held at Maidstone on June 24th, 1937, when a full discussion on the paper by Major Pugh, "Dry Distemper in the Dog," delivered at the previous meeting, took place. At the close of this meeting a presentation was made to Professor T. Dalling—the retiring Hon. Secretary. The President, Mr. F. Crowhurst, in handing over the suitably-inscribed gifts, referred to the excellent work done by Professor Dalling during his seven years in office.

The third meeting was held at Maidstone on October 28th, 1937, when Messrs. T. J. Smith and Nephew's film "The Treatment of Bone Fractures in the Dog and Cat" was shown. The film was ably introduced by Mr. P. M. Sutton of the Royal Veterinary College.

A special meeting of the Division was called on November 25th to discuss a memorandum *re* R.S.P.C.A. Clinics received from the Organising Committee of the N.V.M.A. The attendance was disappointing. Following a lively discussion a number of resolutions were carried and these were forwarded to the N.V.M.A.

Finance.—The financial statement for the year ending December 31st, 1937, shows a balance of £23 5s. 8d. in the bank. The reduction in balance compared with December, 1936, is due to the heavy expenses incurred in connection with the "At Home" of the Bournemouth Congress, and the Silver Jubilee celebration of the Association.

The attendances at the meetings were, on the whole, good, the number of Fellows present at the respective meetings being 30, 20 and 21. Six new Fellows were elected and two resignations accepted, making a total membership of 51 with, in addition, five honorary Fellows.

Lecture.—This concluded the business of the meeting and the Secretary then asked Dr. J. T. Edwards to deliver his lecture, illustrated by lantern slides, entitled "The Probable Significance of some Nutritional Factors in relation to the Common Unsoundnesses in Horses."*

A vote of thanks to Dr. Edwards for his interesting and instructive paper was proposed by Mr. S. F. J. Hodgman and was carried with acclamation.

The meeting then adjourned for tea.

A. Thomson, *Hon. Secretary.*

*This paper, together with a report of the discussion which followed, will be published in a later issue of the *Record*.

AUSTRIAN DOCTORS IN BRITAIN

B.M.A. Maximum

At the opening session of the conference of the British Medical Association at Plymouth it was announced that a committee of the medical profession had been appointed to assist the Home Secretary in the selection of a limited number of Austrian doctors for admission to practice in this country.

It was also stated that, at a recent meeting with Sir Samuel Hoare, representatives of the British Medical Association had expressed the view that the maximum number of Austrian doctors who could be received was 50. This was about one-tenth of the figure which the Home Secretary had in mind, but a severe limitation in the numbers to be admitted was secured. The conference endorsed the action of the Association's representatives at the meeting with the Home Secretary.

Dr. J. C. Matthews, Chairman of the Organisation Committee, replying to a request for figures from the Torquay representative, said that in 1934, 83 foreign doctors were admitted to the medical register; in 1935, 81; in 1936, 39; and in 1937, 40. This year the number so far was 21. Of the total of 264, 191 had become members of the British Medical Association. None of the 21 admitted this year had so far applied for admission to the B.M.A.

AMERICAN INTERNATIONAL CONGRESS PARTY IN LONDON

N.V.M.A. Reception

A Memorable Evening's Entertainment

On Tuesday of last week the members of the American Veterinary Medical Association's tour party for the Thirteenth International Veterinary Congress at Zurich—Interlaken completed the first stage of their travels, landing at Plymouth and journeying to London. Favoured with the simultaneous arrival of England's glorious "high summer" weather, they lost no time in gaining, or renewing, acquaintance with many of the infinitely diverse features of interest the Metropolis holds for the visitor, the party reuniting on the Friday at the Royal Veterinary College where the new buildings and equipment were greatly admired.

It was the privilege and pleasure of the National Veterinary Medical Association of Great Britain and Ireland to entertain the party at the London Casino, W.1, on the evening of that day, when a large number of Members and their ladies were present to welcome them. Many met as old and valued friends, eager to renew the personal contacts made at the London Congress in 1930, and at the last "International" in New York in 1934.

The President (Captain Donald Campbell) and Mrs. Campbell having received the company, the President, in a short welcoming address, said that he would like them all to regard that as quite an informal occasion, which he hoped and believed they would find more enjoyable than one in which formal speech-making was the order of the evening. Every member of the National Veterinary Medical Association of Great Britain and Ireland in this country, however, would like him to try to express the pleasure they felt at being able to receive there that evening their visitors from overseas and to offer them some small measure of hospitality. (Applause.)

Many of the members of the Association had already met members of the American Veterinary Medical Association and that night they were renewing old acquaintance with them. Until that evening he had not had the pleasure of meeting any of them and so naturally he had been looking forward to that occasion with keen anticipation.

The year 1938 had been a memorable one in the history of the veterinary profession both overseas and in this country. The Association in America had celebrated its Diamond Jubilee and he had sent them, on behalf of their Association, their heartiest congratulations and best wishes for the future. (Applause.) When the time came for them to celebrate their

centenary they all hoped that it would find them increased in strength and with their lustre even brighter. (Hear, hear.) It had been a notable year in this country because it had seen the establishment of a great Centralised Veterinary Service for the better control of animal disease. It had also been the Jubilee Year of the Association's official organ, the *Veterinary Record*. Perhaps a number of those who were their guests that night had seen the Jubilee issue of the *Record* which was published the previous Saturday—an issue devoted to a review retrospect and not a little rejoicing: he wondered if he might use the phrase which he believed originated in their country—a country which seemed to specialise in original phrases—and say that on Saturday last the *Veterinary Record* "made whoopee." (Laughter.)

They hoped that their guests would have an enjoyable and interesting trip and if some of them found the opportunity to attend the National's own Congress at Glasgow they would be very pleased indeed. The knowledge that an eminent representative of their country, Dr. Udall, was attending the Congress and was going to read a paper afforded them great pleasure. (Hear, hear.) It was said that science knew no frontiers: on reading of the events that were taking place throughout the world one might be forgiven for entertaining some doubt about it, "but," concluded the President, "so far as concerns your Association and ours, your great nation and ours, the saying is and will always remain true. I have the greatest pleasure, therefore, in welcoming you to-night on behalf of the National Veterinary Medical Association of Great Britain." (Loud applause.)

Dr. John R. Mohler, Director of the Bureau of Animal Industry, Washington, responding, said that he wished "on behalf of my colleagues, both male and female," to express appreciation of the kindness and courtesy of their Association for inviting them and thus affording them that highly-valued opportunity of renewing old friendships and making new ones. He could not refrain from conveying their gratitude, too, for the amount of knowledge they had gained through the profession in this country, for their early professional art came from England, Scotland, Ireland and Wales. Most of the visiting party had been privileged to see that morning the splendid re-constructed Royal Veterinary College; he congratulated them on the wonderful buildings, equipment and teaching staff. (Applause.)

Might he say, finally, that he hoped to have the opportunity, at the forthcoming International Veterinary Congress, of supporting the proposal that honorary membership be conferred on that great member of the profession in this country who had the esteem and admiration of the whole scientific world—Sir John M'Fadyean. (Applause.) Again he wished to thank them and their Association for the kindly reception they had given them all that night.

In its superb theatre-restaurant the London Casino meets to perfection the modern requirement that an evening's amusement should combine good fare, the opportunity of dancing to a band well known "on the air" and a high speed cabaret of spectacle, glamour and skill. Doubtless this represented something of an innovation in the way of "official" entertainment, but equally its complete success was never in doubt for one moment, and those responsible will be gratified to know that this latest manifestation of a pioneering spirit by the "National" prompted the professorial "aside" to the President: "I've had the time of my life and you can take it from me that goes for us all!"

Following is the list of guests, members of the American touring party:—

Dr. John R. Mohler, Director of Bureau of Animal Industry, Washington, and Mrs. Mohler; Dr. A. Eichhorn, Director of Experimental Station, Bureau of Animal Industry; Dr. Santz, Chief of Bureau of Animal Industry, Chile; Dr. F. Menendoz Guillot, Chief of the Bureau of Animal Industry, Porto Rico; Mr. I. E. Newsom, Dean of Colorado State Veterinary College, and Mrs. Newsom; Professor Edwin J. Frick, Head of Department of Surgery and Medicine, Kansas State College, Manhattan, Kansas, and Mrs. Frick; Dr. C. M. Haring, Professor of Veterinary Science, University of California, Berkeley, and Mrs. Haring; Dr. Marstaller, Dean of Veterinary College, Texas, and Mrs. Marstaller; Drs. E. A. Crossman, E. M. Walker, L. R. Sullivan, S. D. Bamber and C. N. Dale, of the Bureau of Animal Industry; Dr. N. H. Howlett, of the Bureau of Animal Industry, and Mrs. Howlett; Dr. W. J. Butler, State Veterinarian, Montana; Dr. O. H. Person, practitioner, and Mrs. Person; Dr. J. Dwight Pierce, practitioner; Dr. William Dennis, practitioner, and Mrs. Dennis; Dr. H. Margrane, practitioner, and Mrs. Margrane; Mrs. Cassius Way; Mrs. E. P. Shaffter; Mr. James W. Jones and Mr. S. P. Beard, students.

Dr. T. P. White, Representative in London of the U.S. Bureau of Animal Industry, and Mrs. White were also present.

A resolution, put forward at the recent conference of the American Medical Association, condemned the sale of sulphanilamide "over the counter and its use by the public, except when prescribed by a physician and taken under his observation" on the grounds (*i*) that the dosage of the remedy was of the greatest importance in obtaining proper results, and (*ii*) that its use might lead to toxic symptoms and manifestations of idiosyncrasy unless blood counts and proper supervision were available.

ROYAL COLLEGE OF VETERINARY SURGEONS

Membership Examinations, 1938

LIST OF SUCCESSFUL CANDIDATES

(Concluded.)

Glasgow

FIRST EXAMINATION.

*Barratt, A. J.
†Bayliss, J. B.
Bell, A. K.
Bradley, J. F.
*Bryson, I. C.
Clarke, A. A.
Coats, W. A.
Evelyn, Miss A.
Gibson, J. C.
Hendrie, E. W.
*Hill, D.
Hunter, Miss A. M.
*Lithgow, T.
Loughridge, S.
McElhone, J. S.
Macleod, W. J.
Macpherson, L. W.
Maneely, R.
Mathieson, N. H.
Miller, A. (C)
*Moir, R. S.
Noble, W. A.
*Paterson, R. A.
Pearson, J. K. L. (C)
Porter, Miss E. V.
*Quigley, P. J.
Roger, S. A.
*Scott, K. E.
Sim, L. S.
Skillen, W. W.
Steele, R. L.
Taylor, G. B.
*Thain, R. I.
*Watson, M.

†Denotes first class honours.
*Denotes second class honours.
(C) Denotes credit in Chemistry.

SECOND EXAMINATION.

Anderson, A. C. (P)
Auld, R. (P)
Bannister, Miss J. D. (P)
Bhal, P. N. (P)
Black, W. M. (H)
Brown, J.
Caldwell, W. D.
Cassells, J. (H)
Corsan, Miss M.
Crosbie, A.
Douglas, R.
Edwards, J. R.
Forbes, D. A.
Fraser, J.
Harris, G. W.
Higgins, A.
Juneja, G. C.
*Kinney, J. A. H.
Lauder, I. M.
Lewis, A. C.
McGuiness, A.
Mackay, J. R.
Mackenzie, G. A.
McLauchlan, D.
McMillan, W. P.
Neil, H. J. D.
Paterson, A. B.
People, J.
Pomphrey, A. M.
Samuel, Miss M.
Semple, W.
Shaw, D. B. (H)
Simpson, W. F.
Stewart, T.
Wilson, J. C. (P)

*Denotes second class honours.
(P) Denotes credit in Physiology.
(H) Denotes credit in Histology.

FOURTH EXAMINATION.

Angus, D. B.
Armstrong, D. M.
Blench, I.
Boyse, D.
Burton, Miss I. W.
Crawford, J. E.
Deane, J. S.
Donald, J. D.
Donaldson, D. W.
Dunn, J. D.
Farrell, A. V.
Hepburn, J. R.
James, Miss O. D.
Merry, A. O.
Milligan, J.
Ogg, J. S.
Reid, A.
Shaw, J. L.
Thomson, D. M.
Turner, H. F.
Weddell, Miss M. H.

Dublin

FIRST EXAMINATION.

Allison, P. T. M. (C)
Beattie, F. W. (B)
Blake, P. A.
Browne, C. C. B.
*Burgess, D.
†Callanan, J. G.
Carroll, G. A.
Clarke, J. B.
*Condon, G. C.
Counihan, F. J.
Devlin, F.
Duignan, T.
Farrell, H. F.
Fay, T. G.
Harrington, D. P.
Johnston, J.
Kettle, T. M.
*McErlean, B. A.
MacGowan, T. E.
Mockler, T. V. (C)
Morgan, F. J.
Mullan, J. F. (C)
Murphy, R. T. M.
*Parkhill, J. S.
Russell, Miss E. B. (C)
*Scally, W. C. P.
Sheehy, P. J.
Sheridan, M. M.
Smyth, P. J. (B)
Stewart, D. J.
Stewart, J. E. (C)
Thornberry, H. (B)

†Denotes first class honours.
*Denotes second class honours.
(C) Denotes credit in Chemistry.
(B) Denotes credit in Biology.

SECOND EXAMINATION.

Bowen, L. T. F.
Burns, T. F.
*Carlisle, J.
Davison, W. F.
Dempsey, N. P.
Dodd, A. M.
Donnelly, A. D.
Fitzsimons, T. G.
*Gallagher, M. A.
Greenhalgh, E. H.
Hannigan, D. V.
*Htwe, S. M.
*Hutch, L.
Kane, G. J. (H)
Kavanagh, S.
Kerr, K. R.
Lynch, T. J. (H)
McCrea, C. T.
McLaughlin, J. F.
Meegan, P. A.
O'Reilly, H. L.
Parkhill, Miss M. E.
Quinn, B. J. (H)
Thompson, T. W. (H)
*Whitty, B. T.
Yasin, S. A. (H)

*Denotes second class honours.
(H) Denotes credit in Histology.

THIRD EXAMINATION.

*Bassett, B. D.
Bolton, S. R. (H)
*Burkhardt, J. A.
Hutch, S.
Keast, P. H. J.
McKinley, W. G.
O'Dwyer, M. J.
O'Hagan, A.
O'Leary, C.
Pritchard, R. W.
Sheehan, Miss R.
Sloan, W. J. (P) (A)
Treanor, G. A. (A)

*Denotes second class honours.
(P) Denotes credit in Pharmacology.
(A) Denotes credit in Anatomy.
(H) Denotes credit in Hygiene.

FOURTH EXAMINATION.

Arnold, T. C.
Collery, L. (P)
Cosgrove, J. S.
Drake, V. A.
Fresby, M.
*Gleeson, L. N.
Hart, B. H. (P)
Harnett, W.
Jones, J.
Lawther, J. M.
O'Reilly, J. J.
Sinnott, P. P.

*Denotes second class honours.
(P) Denotes credit in Pathology.

FINAL EXAMINATION.

(FIVE YEARS' COURSE)

Fallon, J. A.
Martin, W. B.

(FOUR YEARS' COURSE)

Briggs, G.
Crilly, W.
Drewett, E. P. M.
Oliphant, Miss J. A.
Scott, T.

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

Aug. 2nd.—Meeting of the Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1, 4 p.m.

Aug. 21st-25th.—Thirteenth International Veterinary Congress, Zürich.

Aug. 26th-27th.—Thirteenth International Veterinary Congress, Interlaken.

Sept. 5th-9th.—Annual Congress, N.V.M.A., at Glasgow.

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N.V.M.A. CONGRESS

Competitions for the Simpson and Dunkin Golf Trophies

During the N.V.M.A. Congress at Glasgow the above competitions in aid of the Victoria Veterinary Benevolent Fund will be played on Wednesday, September 7th, at the Cathkin Braes Golf Club, and Haggs Castle Golf Club, respectively, by courtesy of the clubs.

The ladies' competition (for the Dunkin Cup) will be played over Haggs Castle in the morning with starting times from 10.30 to 11, and the men's (for the Simpson Cup) in the afternoon over Cathkin Braes with starting times from 2.30 to 3.30.

Both contests will be in the form of a medal round of the course, each competitor playing from his or her lowest handicap. The winner of the Simpson Cup will receive a medal, while the runner up will receive a spoon, presented by the Congress Committee and Captain Simpson, respectively.

Intending competitors are requested to write to Dr. W. S. Gordon, Moredun Institute, Gilmerton, Midlothian, the acting Secretary for the competitions.

Some Empire Exhibition Features

At the Empire Exhibition, in the heart of which, at Bellahouston Park, the Congress will be held, a pavilion which will be of interest to veterinary surgeons is that of the Ministry of Agriculture and Fisheries. This pavilion is devoted to agriculture and allied industries of Great Britain and Northern Ireland. The marketing of pigs and eggs from Ulster is shown by moving models, illustrating the care which is taken to ensure the highest standard of quality, packing, grading, and veterinary control. The Ministry of Agriculture, and the Department of Agriculture for Scotland, devote considerable space to National Mark produce. Demonstrations of testing, grading, and packing of eggs, on a commercial scale, are given regularly on the Scottish Department of Agriculture's Stand.

The progress of forestry is illustrated pictorially and by many fine exhibits, while the research laboratories of the Fishery Board for Scotland, and the Ministry of Agriculture and Fisheries, have combined to put before the public illustrations of many interesting investigations which these Departments are conducting relative to feeding, breeding, and ageing of fish. The different types of fishing gear used are shown. An exhibit by the Discovery Committee deals with whales and whaling. A section of the pavilion which is more purely veterinary is that illustrating, by means of models, farm conditions under which diseases such as tuberculosis, swine fever, liver fluke, and various diseases of fowls, exist, showing specimens of the lesions found with descriptive matter explaining their cause and methods of control.

The Scottish Milk Marketing Board have an interesting exhibit showing a working dairy, with a model byre, processing and manufacturing departments. The byre has accommodation for twelve cows. All the plant and fittings are of the most advanced type. Such processes as pasteurizing milk, bottling, separation of cream, and the manufacture of butter and cheese are also shown.

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PERSONAL

The Royal Lancashire Agriculture Society has conferred its highest honour—that of election as honorary life Vice-President—upon Mr. T. Eaton Jones, F.R.C.V.S., of Waterloo, Liverpool, formerly chief veterinary officer to Liverpool Corporation. Mr. Eaton Jones, who has served for 32 years on its Council, has officiated for 34 years as an honorary veterinary surgeon to the Society, and for 22 years as its honorary consulting veterinarian.

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Marriage.—Taylor—Dennison. At the Earlston Hotel, Prestwick, Ayrshire, on July 18th, 1938, by the Rev. W. R. McKinnon, North Church, Prestwick, Ronald Frank Taylor, M.R.C.V.S., youngest son of the late George James Taylor and of Mrs. Mary L. Taylor, 7, Kingscliffe Avenue, Glasgow, to Agnes Wallace, youngest daughter of the late Gavin Hadden Dennison and of Mrs. Agnes Dennison, 40, Auldhouse Road, Newlands, Glasgow.

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R.C.V.S. OBITUARY

Kennett, William George, Gaze Hill House, Sittingbourne, Kent, registered "existing practitioner." Died July 25th, 1938; aged 83 years.

Potts, William Albert, Captain, late R.A.V.C., of Banbridge, Co. Down. Graduated Edinburgh, December 17th, 1889. Died July 20th, 1938; aged 74 years.

Captain W. A. Potts, M.R.C.V.S.

Captain Potts carried on an extensive practice in Banbridge, Co. Down, for many years. During the War he joined the Royal Veterinary Corps as a lieutenant and, quickly rising to the rank of captain, later was appointed major at Aldershot and was complimented by the War Office on the way in which he discharged his duties.

He was one of the oldest members of the Banbridge Farming Society, to which he was honorary veterinary surgeon. He was recognised as one of the best judges of hunters in the country and was a well-known exhibitor at Belfast, Dublin and other shows. He gained many successes with his mare, Meta, in championship stone wall jumping events. Captain Potts was one of the senior members of the Union Band Masonic Lodge No. 336 and as Secretary of the Hall Committee took an active part in the building of an annexe a short time ago. He is survived by two daughters and one son.

The assembly at the funeral, at the New Cemetery, was representative of a widespread community. Among the many floral tributes was a wreath from the North of Ireland Veterinary Medical Association.

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The Late Professor Andrew S. Macqueen

Mr. Andrew Stewart Macqueen, M.R.C.V.S., whose death was notified in this column last week, was for many years Professor of Biology at the Glasgow Veterinary College. Joining the teaching staff of the College shortly before the War, he was highly esteemed by the students.

Mr. Macqueen, who was at one time an assistant to the late Principal James M'Call at the College, was the youngest son of the late Mr. William Macqueen, of Avondale, and a brother of the late Professor James Macqueen of the Royal Veterinary College, London.

For a considerable period he was in practice as a veterinary surgeon in Linlithgow and later in Cathcart, Glasgow.

The following attended the funeral at Cathcart Cemetery, representing the Veterinary College: Dr. A. W. Whitehouse (Principal), Mr. James Austin (Secretary), Professors H. Begg, W. Robb and G. W. Weir, Messrs. G. D. Dunbar, J. D. Macauley and Alexander Thomson, Mr. W. E. Bennie (President of the Students' Representative Council), and a number of students, together with Professor J. Stewart McDougall and Mr. Geoffrey Lapage, Examiners in Biology for the R.C.V.S. and Mr. J. F. Taylor of Cathkin.

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EDINBURGH DEGREE OF B.Sc. IN VETERINARY SCIENCE

At the graduation ceremony of the University of Edinburgh held on Wednesday, July 20th, the following received the Degree of B.Sc. in Veterinary Science: George Watson Argo, George Chembers Brander, Alfred Tennant Cowie and John Ambrose Dall. All were students of the Royal (Dick) Veterinary College.

COLONIAL AGRICULTURAL PROBLEMS

Soil Conservation and Nutrition

Lord Dufferin and Ava, Parliamentary Under-Secretary of State for the Colonies, opening a conference of Colonial Directors of Agriculture which was begun at the Colonial Office, under his Chairmanship, on Monday last, said that collaboration between the several technical departments and between them and the Administrative Service was essential to progress in all matters concerned with the two fundamentally important subjects of soil conservation and nutrition. Consideration would be given at the conference to matters connected with the work of the Imperial Agricultural Bureaux, which now embraced all the branches of science concerned with crop production and the livestock industry, as well as the pests and diseases of crops and stock. An Imperial Bureau of Forestry was also in process of formation as the result of the recommendation of the Commonwealth Scientific Conference held in London in September, 1936, and an Imperial Bureau for Dairying had recently been started as the result of recommendations made by the same conference.

Colonial Veterinary Service

On recruitment to the Colonial Agricultural and Allied Services, Lord Dufferin said that the scholarship scheme for the training of Colonial Veterinary Officers had not been in operation quite so long as the scheme for the Agricultural Service and therefore it was not so easy to judge results. The Colonial Advisory Council of Agriculture and Animal Health, however, felt justified in recommending its continuance and the Secretary of State had accepted that recommendation. The whole question of recruitment to the Colonial Veterinary Service was under consideration, for early steps would have to be taken to meet the demands of Colonial Dependencies for veterinary officers, particularly in East Africa.

Dangers of Erosion

On the dangers of soil erosion, Lord Dufferin said that it was only during the past few years that the importance of soil conservation had been fully realised. Much work had already been started with the object of checking erosion and of ensuring a satisfactory conservation of soil resources, but much still remained to be done. The maintenance of the cultivable soils and of their fertility must inevitably be the foundations upon which all agricultural policies were built, and unless those foundations were sound the super-structure was bound to fall sooner or later. An exchange of views, therefore, on matters concerned with soil conservation would form an important part of the deliberations of the conference and it was expected that in the discussions the importance of "mixed farming," whereby animal husbandry was introduced into the system of crop production, would be recognised. Increasing attention must, too, be given by Departments of Agriculture to the production of greater amounts of, and greater variety in, the local foodstuffs, and when consideration was given to policies designed to effect improvements in the direction of fostering the production of greater supplies of foodstuffs, nutritional requirements should not be overlooked.

Mr. G. A. Jones (Leeward and Windward Islands) thought that good would come out of the Secretary of State's wish that their problems should be discussed with other departments more

fully. He was glad of the co-operation of the Veterinary and Forestry Departments in their work, especially as the conference was going to discuss soil erosion and nutrition.

Dr. Bryce (Nigeria) said there was good co-operation in Nigeria between the administrative and the agricultural services, though they had not been able yet to go so far as they would like in the matter of co-operation with other services.

Mr. Reinecke (Director of Native Agriculture, Native Affairs Department, Union of South Africa) said that the Union Government were most anxious to co-operate with the Colonial dependencies. It was important that the technical departments should co-operate with the administrative. On the difficult question of de-stocking, he agreed that they must gain the confidence of the people in the steps they were taking. He was glad to be able to give his experience of that difficult question, and to gain from the experience of other officers. Erosion was causing the absolute impoverishment of the natives. Economic rehabilitation of the people after drought was the sole way to solve the difficulty; but at a conference like this they could hammer out means of getting the people to understand the necessity of de-stocking.

The whole of the second day of the conference was given up to the consideration of the question of soil conservation in the territories of the Colonial Empire; and there was a discussion in which a number of leading experts in this country, including Sir Daniel Hall, Sir John Russell, Mr. S. Milligan, and Mr. W. Nowell, took part.

"It was clear from the discussion," states *The Times*, "that the importance of the question is now widely appreciated in the various territories, and active steps are being taken in many of them to remedy or counteract the evils wherever present. Further scientific study of the fundamental factors underlying erosion is still required, and there is still a need for impressing on administrative officers appreciation of the danger of the position and insisting that the prevention of erosion is a definite duty of the administration as a whole and not merely the particular province of technical officers.

"In this connection the importance of collaboration between the various technical departments concerned with the problem and the administration was emphasised. It was felt that as a result of the considerable publicity which had been given to the question during the past few years there had been a great awakening of public consciousness to the dangers of the position, and that useful work was being done in many Dependencies."

(To be continued.)

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LEGAL NOTES

Dispute Over Sale of Cows.—At Henley County Court, recently, a claim for £26 11s. 0d. was made by a Sussex dairy farmer against the Chiltern Dairy Herd of Shogmore Farm, Frieth, Henley, in connection with the purchase of two cows which were returned because they did not give the milk yield stated, and one of the two cows supplied in replacement was found to be suffering from two diseases.

The question of terms of contract was argued at considerable length, and eventually Judge Cotes-Preedy gave judgment for plaintiff with costs.

The plaintiff in the case was Charles John Shepherd, of Dunstables Farm, Henfield, near Brighton, and defendant was Herbert Ford (and others), of Shogmore Farm, Frieth.

Mr. L. Jelliner appeared for plaintiff and Mr. Stephen Benson for defendants.

Mr. Shepherd, in evidence, said that as the result of an advertisement by defendant's firm he wrote ordering two Guernsey cows and calves at £64. Two cows without calves arrived, and he found them both unsatisfactory. After correspondence he agreed to accept two Jerseys at £48. These were delivered on August 7th, and he found on examination the smaller animal was all right, but the larger cow's milk was quite unfit for human consumption. He suspected it was suffering from garget. A veterinary surgeon diagnosed Johne's disease. After correspondence defendants offered another Jersey cow and a calf, and witness went to Shogmore Farm, where he was shown one animal which he valued at £15. Under some sacks was a sick calf, which was suffering from "scours" and looked too poorly to get over it.

Mr. H. S. Wright, veterinary surgeon, of High Wycombe, said he did not think he had ever attended any of the defendant's herd of cows for either mastitis or Johne's disease.

Ford said that he saw the cows before they were dispatched and they were in good condition. He sold them after their return to a man at High Wycombe at 30 guineas each.

The judge ruled that there was nothing to compel plaintiff to accept animals *in lieu* of any returned.

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ABUSE OF DRUGS

Lord Horder on the Need for "Quack Medicine" Trade Legislation

In the House of Lords on Tuesday, Lord Horder made some strong criticisms of the trade in quack medicines, and his demand that the Government should take some action to control the exploitation of public credulity was supported by other peers.

Lord Horder estimated that the vendors of quack medicines which were often deleterious to health were bleeding the public—and the poorest people for the most part—of between £25,000,000 and £30,000,000 a year. He regarded the advertisements by which they were sold—often grossly misleading, if not fraudulent—as being a graver danger than the quack medicines and he indicated that he had the sympathy of reputable newspapers and representatives of other media of advertising in pressing for some reform. He thought that a Government measure dealing with this matter would be a suitable corollary to the efforts being made to improve national fitness.

Lord Gage, who replied for the Government, promised that the Minister of Health would examine Lord Horder's speech and consider whether some warning about the abuse of drugs could be incorporated in the educational side of the national fitness movement. He promised to lay the papers asked for in Lord Horder's motion.

On this assurance the motion was withdrawn by Lord Horder.

Record figures for the milk-in-industry scheme are reported by the National Milk Publicity Council. During May workers consumed 708,273 gallons of milk, an increase of some 22,000 gallons over the previous highest total. There are now 7,249 firms, employing 2,218,506 men and women, operating the scheme—nearly double the figures of a year ago. The scheme is increasing liquid milk sales by 8,400,000 gallons a year.

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The views expressed in letters addressed to the Editor represent the personal view of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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ANIMALS AND AIR RAIDS

To the Editor of the Veterinary Record

Sir,—I have read your leading article on the "Care of Animals in Chemical Warfare" which appeared in the issue of July 2nd with the greatest interest.

The question of animals and air raids has been occupying the attention of the R.S.P.C.A. for over two-and-a-half years. It is a most difficult problem and, as far as the R.S.P.C.A. is concerned, we would gladly co-operate in any way possible with the veterinary profession and we are pleased to see the way in which you have directed the attention of the profession to the whole subject.

We shall shortly be issuing the first edition of a pamphlet on simple first aid for animals injured or contaminated in air raids and, no doubt as knowledge advances, we propose to revise this in accordance with the latest information available.

If any veterinary surgeon would like a copy we should be glad to forward him one and we would particularly draw attention to the scheme already outlined in the Wallasey area, to which we have directed the special attention of the Home Office Air Raids Precautions Department. We understand that the scheme has the tentative approval of the Home Office Regional Inspector.

Yours faithfully,
Fergus MacCunn (Captain),
Chief Secretary.

Royal Society for the Prevention of Cruelty to Animals,
105, Jermyn Street,
London, S.W.1.

July 14th, 1938.

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ELDER POISONING

To the Editor of the Veterinary Record

Sir,—On account of the distortion which is liable to occur in the making of a precis of Divisional Meeting reports and the fact that two letters have appeared in your correspondence columns relative to cases of elder poisoning reported by me to the Yorkshire Veterinary Society, I append a fuller report of the cases, to clarify the issue.

A farmer had two cowsheds containing ten cows each; also two pastures, one beyond the other, communicating by a gate. Until May 13th the gate was kept closed and the cows grazed in the first field only. On May 14th the cows in the first shed were let out and, as the intermediate gate had been left open, they wandered into the further pasture; this being noticed, the gate was closed before those in the second shed were liberated so that the latter only grazed in the nearer pasture. All the cows were housed for the night. On the morning of the 15th, it was evident that every animal in the first shed had been purging during the night; two were unable to rise, two or three were unsteady in gait and in all the milk yield was considerably reduced.

Search was made for a cause and it was found that the further field contained many elder bushes in the hedgerows. They had been cut down generously in the winter and there was considerable growth of new shoots; these had been extensively eaten. It will be remembered that at that time pastures were pretty bare, consequently the curiosity of the cows had led them to the elder shoots. In a normal season they would probably have left them alone.

Treatment consisted of linseed tea *ad libitum*, rest, warmth, and stomachics including nux vomica. The outcome in every case was quickly favourable.

Yours faithfully,
F. C. Scott.

Mill Hill,
Pontefract, Yorks.

July 18th, 1938.

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BOVINE HEALTH AND TUBERCULOSIS

To the Editor of the Veterinary Record

Sir,—In reply to the letter appearing under the above heading in the current *Veterinary Record,* the following details may be of interest to your correspondent:—

Herd A.	Commercial Shorthorns 55.	Reactors 17
Herd B.	Pedigree Shorthorns 44.	Reactors 4
Herd C.	Commercial Shorthorns 33.	Reactors 3
Herd D.	Commercial Shorthorns 37.	Reactors 3
Herd E.	Herefords 56.	Reactors 0
Herd F.	T.T. Friesian & Ayrshire 55.	Reactors 1

With the exception of A these herds are all self-contained, and with the exception of F none of them had been tested before. The number of Welsh cattle included in these tests was negligible.

It is hoped, by rearing calves on the premises and by limiting purchases to recently tested cows, to maintain these herds free from infection. Reactors which do not come under the Tuberculosis Order, 1938, are still unfortunately disposed of through the usual channels.

It is maintained that the establishment of Panel B is a great opportunity for those with enough imagination to grasp its possibilities, and for this reason our thanks are due to the N.V.M.A. who obtained it for us.

I am, Sir,
Your obedient servant,
S. Ll. Trevor.

Llanover Lodge,
Chepstow, Mon.

July 24th, 1938.